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METHODS OF VOICE-PRODUCTION FOR ACTORS IN NORTH AMERICA

by

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled "Methods of Voice-Production for Actors in North America" submitted by Jeremy J. Dix-Hart in partial fulfilment of the requirements for the degree of Master of Arts.

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ABSTRACT

Voice-training for actors, as opposed to Speech-training, has begun to emerge as a separate subject in North American Colleges with acting programs.

Until about 20 years ago, most teachers in this field were either speech teachers or singing teachers.

Voice-training is concerned with the production and amplification of sound in the speaking voice, whereas Speech-training is concerned with the articulation and effective use of words.

An increasing number of schools in North America are now teaching Voice as a separate subject and three different types of emphasis have developed in Voice-training methods. These emphases are referred to as "listening", "kinesthetic or muscle sense" and "emotion or feeling".

"Listening" means that the predominant emphasis is on ear-training, to correct and improve vocal sound.

"Kinesthetic or muscle sense" is used by some teachers who rely more on muscular sensations during the act of speech, rather than ear-training, to guide the student.

"Emotion or feeling" is emphasized in some teaching approaches to give emotional meaning and motivation to Voice exercises, so that Voice-training can be linked more closely with acting.

This study examines the theory and practice of four established Voice teachers to see how these different emphases affect their teaching methods.

The four teachers are: Evangeline Machlin (Boston University), Robert Parks (Carnegie-Mellon University), Kristin Linklater (New York University), and Kathleen Stafford (Bristol Old Vic School, England, Carnegie-Mellon University, and Banff Centre School of Fine Arts, Alberta, Canada.)

The Voice areas examined are: relaxation and body alignment; breath control; phonation and resonance; pitch range and projection. The study compares and assesses the theoretical approach and the practical exercises used by the four teachers in all these areas of Voice-training.

The Speech-training areas of articulation, pronunciation, phonetics, rate, stress, phrasing and oral interpretation are excluded from the study.

The conclusion of the study compares the merits and adaptability of each teaching approach, for possible use by other teachers.

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CHAPTER I

INTRODUCTION

The emergence of Voice-training, as an area distinct from Speech-training, is a comparatively recent development in North American colleges with acting programs. Until about 20 years ago, most teachers in this field were either speech teachers or singing teachers.

Voice-training, meaning the production and amplification of sound in the speaking voice, is tending now to become an area on its own and an increasing number of schools are teaching Voice and Speech as separate subjects.

No analysis or comparison of the methods of Voice-teachers appears to have been done before. A few investigations into the Speech-training programs at individual schools in the United States have been made, but these are not concerned with actor-training.

A dissertation on "Conceptual Trends in Voice and Diction Training in American Colleges and Universities" by Ward Thorval Rasmus (Stanford University, 1955) is a broad survey of rhetoric and Speech-training from 1636 to 1955. It is not concerned with Voice-production for actors.

Although methods of Voice-production for actors are fundamentally similar, they vary in approach according to the predominance of three different types of emphasis in the training: "listening", "kinesthetic or muscle sense" and "emotion or feeling".

"Listening" means that the predominant emphasis is on ear-training, to correct and improve sound production.

"Kinesthetic or muscle sense" is favoured by some teachers who rely more on the sensation of muscular tensions during the act of speech, rather than on hearing, to guide the student.

"Emotion and feeling" is stressed in some teaching methods to give emotional colouring and motivation to Voice exercises so that Voice-training can be linked more closely with acting.

The degree to which any one of these emphases predominates varies from one teaching method to another.

My aim in this study is to examine and compare the theory and practice of four established Voice-teachers, all of whom have taught a considerable body of students, to see how these different emphases affect their teaching methods.

The teachers who are the object of this study are: Evangeline Machlin (Boston University). Robert Parks (Carnegie-Mellon University), Kristin Linklater[1] (New York University), and Kathleen Stafford (Bristol Old Vic School, England, and Carnegie-Mellon University).

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[1] Miss Linklater's method was shown to me, at her request, by Miss Rowena Balos, who was trained by her and who works with her at New York University.

These teachers have been selected to give a reasonably representative cross-section of the various types of emphasis in teaching methods. All four teachers are generally recognized as leading teachers in their field and many other Voice and Speech teachers in North America have either been their students or followed their methods.

Of the four teachers, Evangeline Machlin lays the most stress on "listening".

Robert Parks uses a limited amount of "listening" in his teaching and works a great deal through "muscle sense".

Kristin Linklater avoids "listening" and emphasizes both "muscle sense" and "emotion".

Kathleen Stafford focusses most strongly on "emotion".

To examine how these emphases affect their teaching methods, I have interviewed and observed all the teachers named above for this study. In examining Dr. Machlin's method, I have also drawn material from her written text on Voice-production.[2]

I have also included references to the work of the following teachers: Arthur Lessac (Voice and Speech teacher at the State University of New York, Binghampton), F. Matthias Alexander (formulator of the "Alexander Technique"), Margaret McLean (author of "Good American Speech"), and

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[2] Evangeline Machlin, Speech for the Stage (New York: Theatre Arts Books, 1966).

Iris Warren (formerly Voice-teacher with the Royal Shakespeare Company, England).

Their work is referred to for one of the following reasons:

(a) Because some aspect of their work is relevant to the study.

(b) Because they have trained one of the teachers who is being examined.

(c) Because some part of their method is used by the teacher who is being studied.

(d) Because they employ some method in a particular area which is radically different from those already considered.

The main emphasis of the study is on North American techniques, so that it will have greater relevance to teachers in this country. I hope it will provide some useful information, particularly for teachers, about what methods are currently in use, how much they have in common and what trends seem to be emerging.

The Distinction Between Voice and Speech

Voice-teachers vary slightly in the size of areas which they include under the heading of Voice-production. Some teachers make a theoretical distinction between the two areas of Voice and Speech, but in practice they teach it as a single course. Other teachers make both a theoretical and practical division between the areas and have both separate courses and different teachers for Voice and Speech.

Fundamentally, Voice-training is concerned with the creation of vocal sounds and sound variations, while Speech is concerned with the formation and use of words. Inevitably, there are points at which these two areas overlap.

All the teachers in this study include the following areas in Voice-training: body alignment, relaxation, breath control, phonation and resonance, pitch range and volume and projection.

These areas show a progression from the preparation of the body to produce sound through to the initiation, enlargement, variation and extension of sound.

Body alignment and relaxation precede other areas of Voice-training to ensure that the creation of sound is not impeded from the start by poor posture or tension in the body.

Poor posture can reduce the air capacity of the lungs. As a plentiful supply of breath is needed for good sound production, the proper alignment of the body is a necessary first step in Voice-training.

Bodily tension, particularly in the jaw, neck or shoulders, can hamper the production of sound by causing constriction of the organs of speech. Relaxation is used to counteract these tensions.

Breath provides the motor force which vibrates the cords to initiate sound. This initial vibration of the vocal cords is known as phonation. In order to provide clear phonation and in order to be able to support and extend tone once it has been initiated, the actor has to be able to control both the inhalation and exhalation of his breath.

The sound created by the vibration of the vocal cords is then enlarged and amplified in the cavities of the throat, mouth and nose. This re-sounding of the initial tone is called resonance.

Variations of the sound, in higher or lower pitches, are achieved through adjustments in both the tension of the vocal cords and the shaping of the organs of speech.

The control of all the areas of breath control, phonation, resonance and pitch range, to achieve the maximum carrying power of vocal sound, is called projection.

The areas described above are all concerned with the production of sound. In addition to these areas, some teachers include stress, phrasing and interpretation as a part of Voice-production.

Stress means the use of emphasis on words or syllables in speech in order to clarify meaning.

Phrasing refers to the grouping of words in meaningful units of speech.

Interpretation is concerned with the transformation of written material into effective speech.

Training in these three areas relies solely on the use of words and these areas cannot, at any stage in

Voice-training, be taught in terms of pure vocal sound. These areas therefore belong properly under Speech-training and they are taught as such by most teachers.

As this study is concerned with Voice-training, I do not propose to examine methods of Speech-training, which would include the areas of articulation, pronunciation, phonetics, rate, stress, phrasing and oral interpretation.

I will also exclude the specialized areas of dialects and accents which form a part of Speech-training or acting courses.

Before examining the methods used by different Voice-teachers, it should be noted that the overall organization of the teaching method is affected by the emphasis of a particular teacher.

Those who favor "listening" are more analytical in their approach. These teachers tend to keep the different areas of Voice separated in the early part of the training because students are encouraged to use ear-training at each stage in Voice development, so that they can analyse and correct faults systematically.

Teachers who emphasize either "muscle sense" or "emotion" prefer a more integrated approach and allow some areas in the training to overlap and merge to a greater degree. These teachers view the voice as a totality of sound, body and emotion and they feel that excessive analysis of vocal faults is likely to make the student self-conscious and to produce a voice that is imitative and artificial rather than their own.

Without exception, all the teachers in this study begin with body alignment and relaxation to prepare the body to produce sound, and then proceed to breath control to provide the motor force to support sound.

Once vocal sound has been initiated, those who favour "listening" teach the areas of resonance, pitch and projection in successive order, while the teachers who emphasize "muscle sense" and "emotion" allow these areas to merge simultaneously and do not teach them in any strict order.[3]

The Training Emphases of Individual Teachers

Of the four teachers in this study, Evangeline Machlin[4] lays the most stress on "listening". This emphasis is evident at every point of her teaching. All areas of Voice-production are prefaced by periods of listening either to recorded or live voices to identify specific qualities.

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[3] For a comparative breakdown of the organization of the four teaching methods, see Table 1 at the end of the thesis, p. 117.

[4] Dr. Machlin was in her final year of teaching as Associate Professor in the Theatre Arts Division of Boston University when I saw her for this study. Before teaching at Boston University she was Director of Speech Studies for 17 years at the Neighborhood Playhouse School of the Theatre in New York and was for seven years Lecturer in Speech at Columbia University. Her book, "Speech for the Stage" is used as a text by a number of drama schools in North America.

Dr. Machlin's reasons for employing "listening" are twofold. She believes, firstly, that if a student is able to identify both good and poor qualities in other voices, he will be guided effictively when he tries to encourage, or eliminate, these qualities in his own voice. After identifying these qualities, the student also listens to his own recorded voice to compare his voice quality with others.

Secondly, she believes that it is essential for an actor to develop aural discrimination in order that he can use his ear as a "feed-back monitor" for his own voice when he no longer has a teacher to guide him.

The advantage of listening in this way is that it provides definite objectives for the student while he is training and he is able to compare his voice at various stages of development to see whether he is achieving the vocal qualities he is seeking.

The dangers inherent in "listening" are that the student may either become acutely self-conscious and discouraged by hearing his faults, or, conversely, that he may become uncritical of his voice by listening to himself in a self-indulgent fashion.

Dr. Machlin is aware of these dangers and attempts to counteract them by insisting that students listen to their recorded voices for very limited periods in which they concentrate on a specific voice quality, such as pitch or resonance.

Provided the student is able to listen to his voice in an objective way, this method is useful for correcting faults and learning aural discrimination.

Robert Parks[5] uses "listening" rather less than Dr. Machlin but he does not eliminate it entirely from his teaching method. He maintains that listening for qualities in other voices can be helpful, but he thinks it is less useful for students to listen to their own voices because "hearing can be deceptive and we lie to ourselves and deny what we hear".

By this he means that we are so accustomed to the vocal sounds which we make habitually that it is difficult to recognize them as being "faulty". There is some truth in this statement, but it is difficult to see how a student can be helped to correct a vocal fault unless he has successfully identified the fault to begin with. This is precisely what Dr. Machlin means by developing aural discrimination.

Professor Parks does, in fact, make tape recordings of students' voices at the beginning and end of the first year of training, for comparison of voice quality, but students do not listen to recordings at any other time.

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[5] Robert Parks is an Associate Professor at Carnegie-Mellon University, where Voice and Speech are taught as separate subjects. Professor Parks teaches Voice and Mrs. Edith Skinner teaches Speech. Professor Parks was trained by Mrs. Skinner at Carnegie-Mellon University and he worked as a professional actor for some years before becoming a teacher.

Professor Parks admits that this is due mostly to lack of time and facilities rather than any reluctance on his part to let the students hear their voices. There is a contradiction, then, between Professor Parks' theoretical approach towards "listening" and his use of tape recordings, however limited this use of "listening" may be.

While Professor Parks lays less stress on "listening" than Dr. Machlin, he makes far more use of "muscle sense" and bodily sensation to free the voice. He concentrates on this approach because he believes that most voice problems are due to some form of bodily tension or improper placement of the organs of speech.

As he expresses it, his primary aim is "to show students what not to do, rather than what to do, which suggests some magic formula". The student, he says, should be shown constantly where he is using unnecessary tension until he gradually becomes aware through "muscle sense" of the most relaxed and economical way to produce sounds.

In practice, Professor Parks does this through a considerable amount of physical contact with his students, including massage and manipulation, to give the student specific indications of the correct way to use his body to produce good sound. This is most evident in the area of relaxation and body alignment. While dealing with other voice areas, he will frequently move the student's neck, jaw and head with his hands to show where tensions are present and he uses manual pressure on the ribs and diaphragm to help breath control.

This emphasis on physical contact and manipulation is largely derived from the methods of the Alexander Technique, which Professor Parks has studied and which he uses in modified form in many areas of his teaching. Basically, the Technique is concerned with good body alignment, particularly in the neck and head, and the reduction of all muscular tensions to those required specifically to fulfill any given task.[6]

Concentration on "muscle sense" implies a great deal of individual attention to students, which is both a strength and weakness of this approach. The use of "muscle sense" is advantageous because the student is given specific physical indications by the teacher which enable him to localize and concentrate on his particular areas of tension. The teacher is also able to check more accurately whether the student is following his instructions.

As many voice faults are due to bodily tension and incorrect placement of the speech organs, there is a definite value in working through physical sensation both to release tension and to achieve better placement. This approach is more valuable, however, if the teacher makes a connection between the release of tension and the consequent improvement in sound, which would require "listening" as well.

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[6] For a more detailed description of the Alexander Technique, see Appendix A. p. 119.

Although, as I have indicated, Professor Parks does use some "listening", it is very limited compared with the amount used by Dr. Machlin and it is not connected consistently with the use of "muscle sense" to show students how they are progressing.

Professor Parks' particularly strong emphasis on "muscle sense" has some disadvantages. The individual physical manipulation of students is a time-consuming procedure which can only be handled satisfactorily in a tutorial situation.

The amount of time that can be alloted for tutorials in a large acting program is extremely limited and in general class work Professor Parks is only able to use physical instruction with single students selectively, if at all.

Although Professor Parks would like to work more fully in tutorials, the limitation of time spent on individuals has a positive aspect too. There is a possibility that a great deal of manual guidance and manipulation will make the student too dependent on the teacher, rather than developing the student's own awareness of his faults. The limited time which Professor Parks is able to devote to each student makes this reliance on the teacher less likely.

Like Professor Parks, Miss Rowena Balos[7] emphasizes "muscle sense" and bodily sensation in her teaching method, but she does not use physical contact or manipulation to help the student.

Her reasons for concentrating on "muscle sense" are very similar to those of Professor Parks, although she uses the term "removing obstacles" to explain her approach.

She says that in order to allow the body to produce sound in a direct and economical way, "obstacles" have to be removed, such as tension in the body, poor placement of the tongue and jaw or inelasticity of the ribs, which impede the free production of sound.

Miss Balos believes that the easiest way to identify these problems is through bodily sensation, but she prefers the student to become aware of the use of "muscle sense" through excersise and practice, rather than receiving direct physical indications from the teacher through the use of the Alexander Technique.

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[7] Miss Balos exemplifies the teaching approach of Miss Kristin Linklater. Miss Balos and Miss Linklater both teach Voice at New York University. Speech is taught separately by Miss Nora Dunfee. Miss Linklater was a student at the London Academy of Dramatic Art in England before coming to the United States. She worked as Voice-teacher at the Lincoln Centre in New York and the Tyrone Guthrie Centre in Minneapolis before joining the faculty at New York University, where she has taught Voice for six years. Miss Balos studied at the Boston University School of Fine Arts for two years and was a special one-year student at the London Academy of Music and Dramatic Art. She studied privately with Kristin Linklater and was on of twelve teachers trained by Miss Linklater under a special Rockefeller grant. She has also taught at the Theatre of Living Arts, Philadelphia, the Manitoba Theatre Centre and the Shakespeare Festival at Stratford, Ontario.

She avoids manipulation and physical contact with the student because she believes the student will develop self-dependence more effectively if he is able to make these physical discoveries for himself, with verbal instruction from the teacher.

Although the student relies less on the teacher through this method, the training is slower because more time has to be allowed for the student to make these physical "discoveries" on his own. The teacher also has no reliable means of checking the student's progress except through visual means, which is inadequate.

Unlike either Dr. Machlin or Professor Parks, Miss Balos does not use "listening" at all in her training method.

Miss Balos is opposed to "listening" on the grounds that the student will become self-conscious if he hears his vocal defects on tape recordings and this will hamper his progress. This is certainly a possibility but, as Dr. Machlin points out this danger depends largely on how much the student listens to his voice and whether he is doing it with a specific objective in mind.

Miss Balos also argues that "actors do not hear themselves on the stage and there is no point in working on Voice in terms of listening to yourself".

This assertion cannot be taken literally, as it is obvious that an actor does hear his voice whenever he is speaking, even if he is not listening to it consciously. Miss Balos' concern here is that the actor will "over-listen" to his voice in a self-indulgent way and that his voice will sound artificial and self-conscious as a result.

Her concern is quite valid as an affected voice quality is clearly undesirable for an actor. For this reason, Dr. Machlin, for instance, restricts "listening" to analytical work in the form of a learning excercise and discourages actors from "listening to themselves" when they are acting.

The important consideration is the amount of "listening" which is included in the training. Miss Balos' total rejection of "listening" denies the student a helpful guideline in Voice-training and is unrealistic inasmuch as the student inevitably hears his own voice while he is doing vocal exercises.

Although Miss Balos emphasizes "muscle-sense" and bodily sensation in her teaching method, she also stresses "emotion" and "thought", but to a lesser degree. The use of "emotion" is important in Voice-training for actors because it links the use of vocal sound with the emotions and thoughts which an actor is trying to reproduce on the stage.

Miss Balos uses "emotion" primarily in the area of pitch. Instead of referring to "high or low" notes in the voice, Miss Balos asks the student to equate these different voice levels with emotions such as anger, contempt, joy or laziness.

This approach has the advantage of showing the student how vocal range can be varied to convey different emotional or mental states, rather than matching the voice to musical pitches, and the student is able to make a clearer connection between Voice exercises and their practical application in the acting process.

The use of "emotion" also tends to make vocal exercises less mechanical and rigid by enabling the actor to vary his response to an exercise according to the personal emotional colouring which he chooses to give to it.

The difficulty involved in using "emotion" is the likelihood that strong emotions such as anger, horror or fear will invite an uncontrolled and even harmful use of the voice. Instead of exploring a variety of pitch levels, for instance, the student may be tempted into uncontrolled screaming and shouting which would exploit only the extremities of pitch but would not enable him to achieve controlled flexibility through a learned technique.

Because of this aspect, the most useful application of "emotion" is for more advanced students, who have already achieved a high level of vocal control through more mechanical exercises.

Miss Balos does not use "emotion" in exercises for beginning students until they have achieved relaxed tone production through the use of "muscle sense".

In addition to her use of "muscle sense" and "emotion" in the different areas of Voice-production, Miss Balos employs a unifying concept in her work which she calls "producing the voice from the centre".

The term "centre" is commonly used by movement teachers to mean the centre of gravity, or balance, in the body.

Miss Balos uses the term in both a literal sense, meaning the midriff or centre of the body, and a metaphorical sense, meaning a mental focal point or "centre" of "breath, feeling and energy".[8]

In spite of the vagueness of the latter description, the concept of "working from the centre" does have a purely practical application. In order to avoid constriction of the throat and tongue, which is a common occurrence when a student attempts to "project" his voice or use unaccustomed pitch levels, he is instructed to focus his attention on his "centre" which, physically, is the area of the diaphragm and the source of breath support for his voice.

By doing this, the student is encouraged to use extra breath support to produce sound while allowing the throat and speech organs to remain relaxed, rather than

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[8] The term "centre" was also used by the late Miss Iris Warren, who taught Miss Linklater at the London Academy of Music and Dramatic Art. I asked another student of Miss Warren, Mr. Brian Murray (now a Broadway actor) how Miss Warren had used this term. He said that Miss Warren had referred to the "centre of breath, feelings and spirit", which is a similar description to that given by Miss Balos.

"forcing" the voice by constriction of the throat muscles.

It is also possible that the use of a mental focus or "centre" of breath, feeling and energy provides the student with an impetus to fuse these elements simultaneously when he is speaking and results in a vigorous externalization of the voice which would be desirable for acting.

This concept of the "centre" serves as a means of unifying the various areas of Voice-production and linking them with acting, but it has little practical application to individual voice exercises.

Although Miss Balos uses "emotion" effectively in the area of pitch range, there is little evidence of this emphasis in other areas of her teaching method.

By comparison Miss Kathleen Stafford[9] uses "emotion" far more broadly in her teaching approach and there is some evidence of the use of "emotion" in all areas of Voice-production.

Like Miss Balos, Miss Stafford does not favour "listening" in her approach, although she does occasionally use tape-recordings to help a student to isolate a "stubborn" voice defect. She avoids any form of direct "listening" in her normal teaching process because "students do not know what good or bad voice qualities they are listening for".

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[9] Miss Kathleen Stafford is a Voice and Speech teacher at the Bristol Old Vic School in England. She has also taught Voice at Carnegie-Mellon University, Pittsburgh, U.S.A. and at the Banff Centre School of Fine Arts, Alberta, Canada. Her teaching approach is based largely on the work of the late Bertie Scott, with whom she studied and co-taught in England. Bertie Scott has described his teaching approach in his book, The Life of Acting (London: Kenwell Offset Services, n.d.).

It is very probable that a beginning student, particularly, will not be aware of the vocal qualities he is seeking, but, as Dr. Machlin's method implies, it is quite possible to make students aware of both desirable and undesirable vocal qualities by listening for these qualities in other voices.

Provided the student is listening with specific directives from the teacher in mind, this is not an aimless procedure, as Miss Stafford's objection suggests, but an effective means of giving the student definite goals.

The primary objective in Miss Stafford's approach is to link Voice-production with acting wherever possible by stressing the use of thought and emotion and using these elements to achieve strong projection.

Her basic concept is contained in her instruction to students to "breathe their feelings". Miss Stafford explains this phrase by saying that every act of speech is initiated by a thought impulse or emotion which has to be supported or "carried through" by the breath.

Since all speech is initiated by an intake of breath and sustained by the expulsion of breath and simultaneous activation of the vocal cords, this statement appears to be self-evident.

However, Miss Stafford links emotion with breath support because the effort to sustain emotion through speech requires additional breath support, and this approach aims fundamentally at achieving good projection and carrying-power of the voice.

It is significant that Miss Stafford's method is applied in a two-year training period in which good projection, as a final goal, has to be achieved more rapidly than it does in the longer four-year programs.

In consequence, the entire process is more condensed and emotion is used to link Voice-production with acting as early as possible.

Even in relaxation exercises, students are given suggestions of "intentions" which are similar to "objectives" in acting exercises.

In exercises for breath control, Miss Stafford links the process of inspiration and expiration with the creation and maintenance of moods such as "sadness", "command" or "anxiety".

In the area of resonance, she uses emotions and mental attitudes in exercises which encourage the student to use extra vocal energy to bring the placement of sound forward into the facial "mask"[10] rather than allowing the sound to resonate mainly in the throat, which results in muffled tone and poor projection.

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[10] The "mask" is a term commonly used by Voice-teachers to describe the central part of the face, including the nose, lips and chin.

Like Miss Balos, she relates pitch range to changes in mood rather than the musical scale, in order to make the actor aware of the use of pitch variety to reflect different emotional states

Since the interpretation of thoughts and emotions is a fundamental part of the actor's work, the use of "emotion" and "thought" by both Miss Balos and Miss Stafford is a useful and imaginative emphasis in Voice-production, particularly when it is incorporated to achieve both good projection of the voice as well as an awareness of the use of the voice to reflect feelings.

However, because the use of strong emotions is likely to result in an uncontrolled use of the voice, as I have previously mentioned, the number of "emotional" terms that can be applied effectively to Voice exercises is considerably reduced and the overall application of this approach is consequently limited in practice, as I shall demonstrate in the detailed discussion of the various Voice areas in the following chapters.

CHAPTER II

RELAXATION AND BODY ALIGNMENT

All four teachers in this study begin their training programs with relaxation and body alignment exercises to ensure that Voice-production is not impeded by bodily tension, particularly in the vocal tract, which could prevent the free flow of vocal sound.

If there is tension in any part of the voice mechanism-which would include the breathing muscles, the trachea, the larynx, the throat and the mouth-there may be a constriction of the passage of speech at the point where the tension occurs, which will block the natural outflow of sound. As a result, the voice will sound strained and the prolonged production of sound will tire the speaker.

If, on the other hand, the whole vocal tract is relaxed, the passageways will be fully open and the mechanisms of Voice-production will be able to function fully and efficiently.

Although the main emphasis of relaxation is on the vocal tract, Voice-teachers try to relax the entire body because the student may have residual tensions of which he is almost unaware.

If his body posture is poor, for instance, the incorrect positioning of the spine or head may cause tension in his neck or back muscles. Tensions in the neck, face and shoulders in particular affect the vocal tract adversely by constricting the throat, jaw and tongue muscles and narrowing the area in which sound is initiated and resonated. Even habitual frowning may cause latent tension in the forehead which, in turn, may spread to adjacent muscle groups.

Poor spinal alignment, resulting in stooped or unnatural posture, also prevents the rib-cage from moving freely and reduces the amount of air which can be taken in and expelled to support the voice.

The basic aim of relaxation and body alignment in training methods, therefore, is to prepare the body to produce sound with as little tension and impediment as possible.

It is particularly difficult for the actor to achieve constant relaxation of the vocal tract while using his body and emotions vigorously on stage. A role may require him to use his voice while he is in cramped and uncomfortable bodily positions, but the resulting tension should be kept out of his vocal tract if his voice is to function satisfactorily.

Relaxation exercises are designed to help the actor to achieve this relaxed quality of the vocal tract no matter what physical or vocal demands are placed upon him.

The term "relaxation" may easily be confused with a state of mere inertia, which is not the object of relaxation for Voice-production. The use of relaxation is to rid the body of superfluous tensions only and to bring the body to a state of readiness to perform.

All four teachers agree on the reasons outlined above for using relaxation and body alignment and they are remarkably similar in their practical approaches in this area, which differ more in degree than in kind, according to the emphasis of a particular teacher.

The nature of relaxation and body alignment clearly implies "muscle sense" rather than "listening" or "emotion", although there is some evidence of the latter two emphases in this area.

All four teachers rely heavily on the work of movement teachers to do much of the necessary work on body alignment and posture, although additional exercises to support the work done by the movement teachers is frequently included in Voice classes.

Dr. Machlin prefaces this area by asking the student to listen to a recording of actors' voices to compare the degree of relaxation achieved by the various actors in performance. She also asks students to listen to the voices of actors in live stage performances to identify relaxed vocal quality.[1]

At this early stage in training, she does not ask students to listen to recordings of their own voices, so this initial use of "listening" is only included to help students to recognize relaxed vocal quality in others.

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[1] See Appendix B, "Listening to relaxed speech", Exercises 1 and 2. p. 123.

Even though the student applies "listening" within limitations, he experiences some awareness of the ultimate purpose of relaxation by doing so. Dr. Machlin's use of records and tape recordings in this area is consistent with her intention to provide aims and guidelines for the student at each stage of the training. Of the four teachers, she is the only one who uses "listening" in this area.

Dr. Machlin then proceeds with a series of total body relaxation exercises which she derived from techniques employed by a New York physician, Dr. Josephine Rathbone. Dr. Rathbone developed the series of exercises initially to treat engineers who were suffering from hypertension caused by working long shifts in war plants.

The exercises are based on muscle contractions and releases. The contractions are made sharply and briefly and the releases are sustained for a longer period of about 30 seconds.

The series of exercises can be done in a lying, sitting or standing position and each group of exercises concludes with "energizing" exercises to prepare the body for action after relaxation.[2]

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[2] See Appendix B, "Body Relaxation Exercises", pp. 123-125.

These tension-and-release exercises are an effective and systematic means of localizing and relieving tensions throughout the body and the same exercises, or slight variants of them, are used as basic relaxation exercises by all the teachers in this study.

Following the relaxation exercises, Dr. Machlin uses a number of "transitional" exercises which she has developed to loosen up the body and energize it in preparation for speech. These include exercises in free movement, shaking and swinging parts of the body,[3] and are more numerous and complex than exercises used for the same purpose by the other teachers.

The exercises for both relaxation and subsequent energization of the body are thorough and efficient, as described to me by Dr. Machlin, but I found that she used them very briefly in actual class-work.

Dr. Machlin told me that she uses progressively fewer relaxation exercises because students learn to achieve a state of relaxation more rapidly as they advance, until only those exercises connected directly with the relaxation of the vocal tract are necessary.

Although students may require fewer exercises of this kind as they progress, the amount used by Dr. Machlin was, in my opinion, too limited to be of real value.

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[3] See Appendix B, "Transition Exercises", p. 128.

Dr. Machlin does not include any exercises specifically for spinal and general body alignment in her Voice classes but she works in close co-operation with the movement teacher, Mr. Joe Gifford, to ensure that work in this area is included in movement classes.

By comparison, Professor Parks devotes far more time and attention to both relaxation and body alignment and his combination of exercises in general classes and manipulation and massage in tutorial sessions was the most thorough work in this area by any of the four teachers.

Professor Parks says that he lays particular stress on relaxation because of the increasing use of conflict and confrontation in improvisational acting classes, which causes pent-up energies in acting students. These energies cannot find their logical release in physical violence and result, instead, in increased physical tension which has to be counteracted by additional concentration on relaxation.

This argument supplies a valid reason for a strong emphases on relaxation and makes a useful connection between the work done by students in acting classes and Voice classes.

Professor Parks relies entirely on "muscle sense" in this area, but unlike the other teachers he reinforces his verbal instructions with manual guidance to check the student's progress and uses massage to eliminate stubborn tensions.

In general class-work, Professor Parks begins by using tension-and-release exercises which are almost identical to those used by Dr. Machlin,[4] although they are not as detailed as Dr. Machlin's and do not include versions of the same exercises in sitting and standing positions. However, these additional exercises are provided purely for convenience by Dr. Machlin for use in situations where it is not possible to do the exercises lying down.

Professor Parks also includes the same exercises as Dr. Machlin for loosening the upper body and neck muscles after rising from relaxation on the floor.[5] The exercises which he uses for energization of the body are few in number compared with those of Dr. Machlin but are based on exactly the same principle of bouncing and swinging the body, with the addition of a more vigorous running exercise.[6]

In tutorial sessions, Professor Parks applies massage and manipulation to students individually. This is done with the student lying on a table, either on his back or stomach.

Using methods of the Alexander Technique, Professor Parks loosens the student's arms, legs and neck by bending them gently and he massages the spine, shoulders and neck muscles.

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[4] See Appendix C, Exercises 1, (a) to (h), p. 130.

[5] See Appendix C, Exercises 3 and 4, p. 131.

[6] See Appendix C, Energization exercises, 1 to 3, p. 131.

While the student is lying on his back, Professor Parks applies pressure to the student's head and tugs the head gently away from the body, supporting the head with his hands. This is done to elongate the spine and reduce neck tension.

Professor Parks stresses that this type of manipulation should not be attempted without full training in the use of the Alexander Technique.

When the student has relaxed on the table, Professor Parks swings him into a sitting position, supporting his shoulders and knees as he places him, and proceeds with vocalized exercises.

Professor Parks uses support to bring the student into a sitting position so that the student can retain the full sense of muscle relaxation, which he has achieved lying down, when he begins other voice exercises.

The amount of manipulation and massage which Professor Parks applies is varied according to needs of a particular student.

It is unlikely that all students need this intensive help to achieve muscular relaxation, but for those with persistent tension problems this direct help through manipulation is certainly advantageous. The heavy time-demands of this approach, however, mean that each student can be given a maximum of one 20-minute session per week, which is hardly enough time in which to use this technique to full effect. This is offset, though, by the considerable number of routine relaxation exersises which are included in general class-work.

In general classes, Professor Parks also includes a number of exercises for body alignment, which are designed to stretch the spine and improve total bodily flexibility and deportment.[7] These exercises are also used by the movement teacher, Mr. Jewel Walker, and they comprise an effective series of body-stretching exercises in prone, sitting, kneeling and standing positions.

Like Professor Parks, Miss Rowena Balos works entirely through muscle sense in the area of relaxation and her basic exercises are identical to those used by Dr. Machlin and Professor Parks. She does not, however, go as far as Professor Parks in using manipulation or massage to deal with the elimination of tensions, as she prefers the students to develop an awareness of muscular relaxation on their own without depending on the teacher for direct physical guidance.

Miss Balos begins the process of relaxation by telling the student to relax the entire body and to think of "clouds" or "velvet". Although these images suggest some use of "thought or emotion", Miss Balos' intention is to clear the mind of everything but restful and relaxing mental pictures, to aid the release of bodily tension.

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[7] See Appendix C, "Body Alignment Exercises" 1 to 12, p. 131-133.

Although thought is involved, then, it is used in the negative sense of "thinking of nothing" and the intention is consequently the opposite of the positive use of "thought and emotion" which Miss Balos employs in the area of pitch control.

Miss Balos proceeds with a series of tension and release exercises similar to those used by Dr. Machlin and Professor Parks,[8] which are performed lying down. In a standing position, she performs exercises for loosening the upper part of the body[9] and the neck muscles.[10] The other teachers also use both exercises.

As I have indicated, Miss Balos does not apply any manipulation or massage herself, but she does include two exercises in which the student uses self-applied massage to the jaw and neck muscles to relieve tension[11] and a third exercise in which a student rolls or manipulates the neck of a fellow student to relieve neck tension.[12]

All three exercises are an effective means of reducing muscular tension and the first two exercises have the added advantage of requiring no outside aid to perform them. These exercises illustrate Miss Balos' contention that the student should develop self-reliance rather than depending on the teacher for direct aid.

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[8] See Appendix D, Relaxation exercises 1 and 2 (a to h), p. 134.

[9] See Appendix D, Relaxation exercise 5, p. 135.

[10] See Appendix D, Relaxation exercise 13, p. 135.

[11] See Appendix D, Relaxation exercises 8 and 11, p.135.

[12] See Appendix D, Relaxation exercise 3, p. 134.

Her exercises for energization[13] are brief but follow the same principle of free movement and shaking of the limbs which is used by the other teachers.

In order to test the effect of relaxation on the voice, Miss Balos also instructs students to attempt to speak or count while performing strenuous exercises, or to recite a monologue while hanging down from the waist to feel the more relaxed voice quality when customary neck tension is released.[14]

This supplies a useful link between silent relaxation exercises and the relaxed use of the voice, which is not emphasized as clearly by the other teachers. Miss Balos specifically refers to "feeling" the sense of muscular relaxation, which is consistent with her stress on the use of "muscle sense". Although is is certainly possible to "feel" the reduction of muscular tension, these vocal checks imply some degree of "listening" as well if the student is going to identify the difference in vocal quality satisfactorily.

In general voice classes, Miss Balos includes a number of body alignment exercises, which are used extensively by the movement teacher, Mr. Kelley Holt, in his movement classes.

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[13] See Appendix D, Energization exercise 1, p. 135.

[14] See Appendix D, Relaxation exercises 12 and 14, p. 135.

These are spine-stretching and deportment exercises which are done in lying, sitting, kneeling and standing positions.[15]

Although they are not identical with those used by Robert Parks, they are very similar and serve the same purpose.

Miss Kathleen Stafford, follows a pattern similar to the other teachers in the area of relaxation insofar as she uses basic tension-and-release exercises[16] and head-rolling and shoulder-rolling exercises.[17]

She differs from the other teachers in her use of "thought" and "intentions" in some of her exercises for both relaxation and energization. These exercises contain suggestions for mental attitudes, or imaginary situations and roles rather than demanding specific emotional reactions, but since they serve the same purpose of connecting Voice exercises with acting, they form a part of the "emotional" emphasis used by Miss Stafford.

In one relaxation exercise, for instance, Miss Stafford gives the students suggestions of animal roles, which they are asked to assume. She tells the students to lie in relaxed postures, either on the back, stomach or side, "like a cat" or "like a dog". While the students are in these comfortable and relaxed positions, Miss Stafford will suggest that they imagine they are watching some form of prey, like a mouse or a bird, and to keep their concentration and mental focus on this imaginary object.

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[15] See Appendix D, Body Alignment exercises 1 to 6, p. 136-137.

[16] See Appendix E, Relaxation exercises 1 and 2, p. 139.

[17] See Appendix E, Rising from Relaxation exercises 1 to 3, p. 139.

Students are then divided into "cats" and "mice" and lie opposite each other holding concentration with mutual eye-contact and preparing for an eventual "spring" by the person assuming the "cat" role and an evasion by the student playing the "mouse".

The objective of this type of exercise is to achieve a simultaneous state of relaxation and readiness for action as well as involving the student's imagination in a simple form of acting and improvisation.

Miss Stafford's exercises to energize the body after relaxation also differ from the bouncing, swinging and shaking of the body used by the other teachers.[18] Miss Stafford instructs students, instead, to begin by walking forwards, sideways and backwards on tip-toe. The pace is increased to a faster walk and then an easy run. The running and walking is done in two ways: the walk or run may be "aimless" or it may be done "with a purpose".

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[18] See Appendix E, Energization exercises 1 to 3, p.140.

Miss Stafford sometimes suggests a definite purpose and locale. The student may be told to imagine, for instance, that he is in an airport and trying to find out the time of his flight, or that he has heard a stone crash through the window of his home and is hurrying to find out the cause.

These simple suggestions have the effect of making the exercises far less mechanical than routine drills for relaxation and energization and are particularly helpful for actors because they connect the Voice exercises more clearly with acting.

Like Dr. Machlin, Miss Stafford relies almost entirely on work done in movement classes for the correction of body alignment.

She does, however, include three exercises for stretching the spine and general deportment in her Voice classes.[19]

These exercises are all done in a standing position and are not as detailed or comprehensive as the exercises done by Professor Parks and Miss Balos.

Summary

All four teachers focus chiefly on "muscle sense" in the area of relaxation and body alignment. Many of their basic exercises are very similar, if not identical.

All four teachers use some form of tension-and-release exercises, head-rolling exercises and energization exercises.

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[19] See Appendix E, Body alignment exercises 1 to 3, p. 138.

Professor Parks and Miss Balos both concentrate exclusively on "muscle sense" with the exception of Miss Balos' vocal checks for relaxation, which also imply some degree of "listening".

Of the two teachers, Professor Parks goes further than Miss Balos in his use of manipulation and massage and his method is particularly impressive as a means of eliminating stubborn tensions.

Both Professor Parks and Miss Balos concentrate on body alignment and spinal exercises more directly than the other two teachers. This, too, reflects their concern with "muscle sense" throughout the entire body.

Consistent with their teaching emphases, Dr. Machlin and Miss Stafford use some degree of "listening" and "emotion" respectively, but these emphases complement, rather than replace, the use of "muscle sense" in this area.

Dr. Machlin's use of "listening" is limited in this area, but it provides a useful initial guideline for the student.

Miss Stafford's use of "emotion" in the form of "intentions" and role-playing is more far-reaching and provides an imaginative bridge with acting.

CHAPTER III

BREATH CONTROL

When students have learned to eliminate unnecessary tensions through relaxation exercises, Voice-teachers proceed to training in breath control, because breath supplies the motor force which initiates and sustains vocal sound.

In normal breathing, without speech, inhalations and exhalations of breath last approximately the same length of time.

Even in relaxed speech, however, this breathing pattern alters: the inhalations become more rapid and the exhalations are slower, so that vocal sound can be initiated and sustained as long as necessary.

In ordinary speech, the speaker seldom needs a sustained breath supply because his voice does not have to carry for any distance and he is able to renew his breath supply whenever necessary.

For stage use, actors require a more ample breath supply to produce clear and carrying tone and to speak long passages without pausing for breath, if the text requires it.

In their training methods for breath control, Voice-teachers concentrate mainly on rib expansion and the controlled use of the diaphragm.

Voice-teachers encourage rib expansion to provide additional space in the chest cavity, enabling the lungs to inflate fully with air, which supports vocal sound.

In order to maintain the maximum breath supply for stage speech, many teachers instruct students to keep their ribs expanded fully while they are speaking, only allowing their ribs to contract when they pause to renew their breath.

This technique is called "rib reserve breathing," because the fuller expansion of the ribs and lungs permits a "reserve" of air in the lungs which may be needed for extended speech.

Voice-teachers also emphasize the movement of the diaphragm because it can control the speed and pressure of air as it enters and leaves the lungs.

The diaphragm forms a muscular partition between the chest and the abdominal cavities. It acts as an air pump by flattening down to deepen the space inside the chest as air is drawn in, and relaxing upwards as air is expelled.

Normally, the movement of the diaphragm is involuntary, but both the upward and downward movements of the diaphragm can be controlled consciously.

Extended speech requires a vigorous downward thrust of the diaphragm, to draw in the maximum supply of air, and a slow upward movement of the diaphragm to expel the air in and even stream, which provides steady and powerful support for the voice.

During exhalation, the upward movement of the diaphragm can also be aided by contracting the outer abdominal muscles. This muscular contraction causes pressure against the diaphragm and, in turn, the lungs, which are emptied more fully than usual.

In addition to breathing exercises to provide the maximum support for vocal sound, some teachers include exercises to develop techniques for laughing, weeping and screaming on the stage.

These techniques form a logical part of training in breath control because laughter and weeping can be simulated by vigorous movements of the diaphragm, accompanied by suitable vocal sounds. Similarly, actors can develop a "stage" scream by using a strong upward thrust of the diaphragm while allowing the larynx and throat muscles to relax during the scream. If an actor tenses his throat muscles or larynx, he causes constriction in the area of the vocal cords which may lead to hoarseness and even loss of voice.

All the four teachers in this study agree on the fundamental necessity of developing diaphragmatic support for the voice and encouraging mobility of the ribs to ensure a good breath supply for extended speech.

Many of the basic exercises which they use are similar, but their individual teaching emphases are more apparent than they are in the area of relaxation and body alignment.

Dr. Machlin begins work in breath control by asking students to listen to recordings of accomplished actors performing Shakespearean speeches, to hear how the actors sustain their breath in verse-speaking. The student makes notes of audible inhalations of breath by the actors on the recordings and then attempts to read the same material, breathing only in the places marked. Dr. Machlin asks students to rate and compare the breath control achieved by various actors after listening to them.[1]

These exercises typify Dr. Machlin's emphasis on "listening" and they provide students with an effective illustration of the need for extended breath control in acting. The exercises go further than the "listening" exercises for relaxation. In addition to identifying good breath control, students also try to match the breathing patterns of the actors on recordings, which may be helpful insofar as the students appreciate the difficulty of sustaining breath for longer periods.

There is a danger, though, that students may be tempted to copy the phrasing of the recorded voices as "ideal" readings of the lines rather than developing their own interpretation of the text. Because this could lead actors to imitative and unoriginal, the use of this type of exercise should, in my opinion, be extremely limited.

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[1] See Appendix F, "Listening for Breath Control," Exercises 1-3. p. 141-142.

After students have listened to recordings to identify the use of breath control, Dr. Machlin starts a series of exercises in which students become aware of rib and diaphragm movements while they are in different postures, and they begin to prolong their exhalations of breath. Students also learn to emit their breath over a set number of paces while walking. All these initial exercises are performed silently, in order to strengthen the breathing process in isolation, before it is used to support the voice.[2]

Dr. Machlin uses more silent breathing exercises than the other teachers, which reflects the more gradual and analytical progression in her teaching method. The other teachers use fewer unvocalized breathing exercises, so that students can make an immediate connection between breath control and vocal support.

Although the silent breathing exercises used by Dr. Machlin develop extended exhalation and rib expansion satisfactorily, vocal sound should be included at an early stage in breathing exercises, in my view, so that breath control does not become and end in itself, in isolation from the total speech process.

Following the silent breathing exercises, Dr. Machlin accentuates the use of of the diaphragm in exercises which require "panting" breath.[3] Panting causes a vigorous downward movement of the diaphragm, to inhale air swiftly, and a quick upward movement of the diaphragm as the air is expelled rapidly. The other teachers also use similar forms of panting exercises, which help to make the diaphragm stronger and more flexible.

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[2] See Appendix F, "Breath exercises with normal inhalation and gradual exhalation," Exercises 1 to 6, p. 142.

Dr. Machlin then adds vocal sound in a group of exercises which demand strong inhalation followed by humming or counting numbers during exhalation.[4] These exercises give the student an awareness of the use of breath to control and sustain vocal sound. The other teachers use similar exercises for the same purpose.

When students have learned to extend their breath while counting numbers, Dr. Machlin asks them to apply breath control to poetry and dramatic material. Students control their breath inhalations by taking breath at specific points in the material and learn to extend exhalation over sentences of varied length.[5]

Dr. Machlin's breathing exercises, outlined above, form a systematic and thorough progression from "listening" exercises through to the use of extended breath support for dramatic material. After students have mastered these aspects of breath control, Dr. Machlin introduces techniques for screaming, laughing and weeping on stage.

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[3] See Appendix F, "Breath Exercises with panting exhalation," Exercises 1 to 5, p. 143.

[4] See Appendix F, "Breathing exercises with strong inhalation followed by exhalation with humming and speaking," Exercises 1 and 2, pp. 144-145.

[5] See Appendix F, "Breathing exercises with strong inhalation followed by released exhalations in reading," Exercises 1 to 4, p. 145.

Once again, she asks students to listen critically to recorded examples of screaming[6], laughing and weeping[7] to compare the relative mastery of these techniques by well-known actors.

Dr. Machlin develops the technique for a stage scream in gradual steps. Students first learn to inhale deeply and force the air out with strong pressure from the diaphragm and abdominal muscles, using only whispered sound. Dr. Machlin stresses the relaxation of the throat and larynx throughout the production of a scream, so that the student relies on extra breath pressure to produce the sound, rather than constriction of the throat muscles, which irritates the vocal cords.

When students are able to use strong air pressure to produce the scream, without throat tension, Dr. Machlin slowly adds sounds such as "Ho," "Hi" and "Hey" until the sound increases to a convincing scream. Finally, students learn to incorporate screams within dramatic material.[8]

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[6] See Appendix F, "Exercises for developing the stage scream," Exercise 1, p. 146.

[7] See Appendix F, "Exercises for laughing and sobbing," Exercise 1, p. 148.

To develop stage laughter and weeping, Dr. Machlin uses "panting" breath exercises, as both laughter and weeping require quick upward and downward movements of the diaphragm, similar to the action of panting. The beginning exercises are done with silent panting.

Students then add the basic sounds of laughter and weeping, such as "Ha, ha," or "Oh, oh," and vary and prolong these sounds until they resemble realistic laughter and weeping.[9] When they are able to reproduce laughter and weeping with ease, Dr. Machlin asks students to incorporate these techniques into dramatic material.

Dr. Machlin's exercises for screaming are particularly helpful for actors because they learn to produce an effective stage scream without throat tension, which could cause vocal strain and even damage to the vocal cords. The exercises for laughing and weeping are useful for actors who have difficulty in reproducing these emotional reactions convincingly on stage, though many actors can do so with little or no practice in these techniques.

Robert Parks, in keeping with his main emphasis, concentrates mostly on "muscle sense" in his exercises for breath control.

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[8] See Appendix F, "Exercises for developing the stage scream," Exercises 2 to 4 p. 147.

[9] See Appendix F, "Exercises for laughing and sobbing," Exercises 2 to 8, p. 148.

Initially, he tells students to place their fingers on their midriffs to feel the action of the diaphragm during breathing.

Students then work in pairs, placing their hands on each others ribs to feel the increased movement that is necessary for full rib expansion.[10]

In a more advanced exercise, pairs of students place their hands on each other's ribs, or diaphragms, and attempt to match each other's breath cycle, one student breathing in as the other exhales. This exercise incorporates muscle sense effectively to develop rib expansion as well as creating a controlled and rhythmic breath supply for speech.[11]

Like Dr. Machlin, Professor Parks includes exercises in which students explore the use of breath in different bodily postures[12], and exercises to prolong exhalation while walking[13] or counting aloud.[14] However, Professor Parks introduces voiced sounds, either through humming or counting, sooner than Dr. Machlin so that students will link breathing exercises with vocal support as soon as possible.

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[10] See Appendix G, Exercises 1 to 3, p. 150.

[11] See Appendix G, Exercise 5, p. 151.

[12] See Appendix G, Exercise 2, p. 150.

[13] See Appendix G, Exercise 6, p. 151.

[14] See Appendix G, Exercise 7, p. 151.

Professor Parks begins exercises for activating the diaphragm with "panting" exercises[15] similar to those used by Dr. Machlin, although, once again, he adds vocalized sounds such as "Huh", "Hi" or "Hey" almost immediately, so that students use breath exhalations to support sound.

Professor Parks proceeds with breathing exercises that combine vigorous movements of the arms and legs with the swift inhalations and slow exhalations of breath that are needed for extended speech.[16]

To develop rhythmic control of breathing while performing vigorous movement, Professor Parks adds exercises in which students lie on their backs and "bicycle" with their legs in the air[17] or stand up and run "in place."[18] These exercises test the actor's ability to control his breath in spite of considerable physical exertion.

Professor Parks' emphasis on "muscle sense" to develop breath control shows most noticeably in his use of individual manipulation on more advanced students.

In tutorial sessions, the student lies on a table and Professor Parks applies manual pressure to the student's ribs to develop resistance to the tendency of the ribs to

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[15] See Appendix G, Exercises 8 and 9, p. 151.

[16] See Appendix G, Exercises 13 to 16, p. 152.

[17] See Appendix G, Exercise 10, p. 151.

[18] See Appendix G, Exercise 11, p. 151.

"collapse" rapidly on exhalation.

Profesor Parks also applies a rapid, jerking pressure to the student's diaphragm while the student produces open vowel sounds, to make the diaphragm move flexibly and to ensure that the student uses diaphragmatic pressure to control the tonal sounds.

The methods of manipulation which Professor Parks uses here are derived, in modified form, from the Alexander Technique.

As most students are able to achieve good rib expansion and diaphragmatic flexibility without direct help from the teacher, this type of individual manipulation is only beneficial, in my opinion, for students who are exceptionally slow in responding to standard breathing exercises.

When students have mastered basic breathing exercises, Professor Parks asks them to maintain good breath control while moving energetically and speaking learned material.

In one exercise of this kind, students work in pairs, miming the actions of fencing while they recite alternate lines of a speech in blank verse.[19] This exercise reveals the student's mastery of breath control because the added movement upsets normal breathing patterns and makes controlled exhalation more difficult.

Miss Rowena Balos also concentrates most on "muscle sense" in her exercises for breath control, but her exercises are not as vigorous as those of Professor Parks and she does not use manipulation on her students at any stage in the training.

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[19] See Appendix G, Exercise 18, p. 152.

Miss Balos prefers more relaxed exercises for breath control because she believes that the use of strong abdominal pressure prevents the easy, natural movement of the diaphragm. Her argument has validity because some of the more energetic breath exercises over-develop the outer abdominal muscles and, in turn, reduce the potential movement of the diaphragm by forming a tight barrier around it.

Miss Balos uses very similar exercises to Professor Parks to show students how to feel the movement of the diaphragm, by placing their fingers on their midriffs, and how to expand their ribs easily to allow a full supply of air in the lungs.[20] She also asks students to assume a variety of bodily postures to discover the different quality of rib and diaphragm movements that are possible in various positions.[21]

In both sitting and standing positions, students concentrate on expanding the entire rib-cage by blocking off one nostril with their fingers and breathing slowly and and deeply through the other nostril.[22] The effort to inhale slowly through one nostril makes the student aware of the gradual expansion and contraction of the ribs. Miss Balos was the only teacher who used this type of exercise.

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[20] See Appendix H, Exercises 1 and 2, p. 154.

[21] See Appendix H, Exercise 3, p. 154.

[22] See Appendix H, Exercise 4, p. 154.

For diaphragm movement, Miss Balos tells students to hold their arms parallel with their shoulders and draw them back rapidly, in rhythm with puffing breath.[23] The action involved in this exercise is similar to the "panting" exercises used by the other teachers, except that the raising of the arms encourages an outward movement of the ribs as well. The exercise thus incorporates both rib expansion and dia diaphragm movement, which makes it an exceptionally useful form of "panting" breath.

Miss Balos also includes standard breathing exercises, such as raising and lowering the arms while inhaling and exhaling[24], counting numbers while exhaling[25] and raising and lowering the torso from the waist while sustaining vocal sounds.[26]

Like Professor Parks, Miss Balos uses breath to support voiced sounds in all except the beginning exercises.

In contrast to Professor Parks, Miss Balos aims at more relaxed breath support in advanced breathing exercises. For example, students learn to talk to each other on a "sighing breath." This means that the student completes an entire sentence in one breath, as if he were sighing. Although the exercise requires prolonged breath to complete each sentence, the breath is expelled in an easy and relaxed manner, unlike the vigorous breath required for Professor Parks' "fencing" exercises.

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[23] See Appendix H, Exercise 5. p. 155.

[24] See Appendix H, Exercise 7. p. 155.

[25] See Appendix H, Exercise 8. p. 155.

[26] See Appendix H, Exercise 6. p. 155.

Miss Balos' exercise in "sighing breath" helps s students to achieve prolonged and relaxed vocal support, but it does not prepare them to use breath support effectively while performing energetic movement on stage.

Miss Kathleen Stafford's procedure for breath control exercises is similar to those of the other teachers in the early stages, but her more advanced exercises emphasize the use of breath to sustain "emotion."

She begins with exercises in which students lie on the floor and feel the action of their diaphragms with their fingers as they make light, puffing breaths.[27] The other teachers use similar exercises for the same purpose.

Miss Stafford follows this introductory exercise with two silent breathing exercises. Students lie on the floor and breathe in and out as they raise and lower their torsos from a prone to a sitting position. In a variant of this exercise, students touch their toes as they inhale, and exhale as they lie down again.[28] Miss Stafford uses fewer silent breathing exercises than Dr. Machlin because she believes that students should use breath to support vocal tone as soon as possible.

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[27] See Appendix I, Exercise 1, p. 156

[28] See Appendix I, Exercises 2 and 3, p. 156.

Miss Stafford places particularly strong emphasis on rib-reserve breathing and insists that students keep their ribs expanded fully while speaking, only allowing the ribs to contract briefly as breath is renewed.[29] In order to do this, students concentrate on driving air from the lungs with diaphragmatic pressure before the ribs "collapse." This type of exercise is valuable for developing extended breath support.

To exercise the diaphragm, Miss Stafford uses "panting" exercises[30] which are identical to those used by Dr. Machlin and Professor Parks.

Miss Stafford's more advanced breathing exercises feature a marked use of resonant sounds such as "Meng-mah" and "Ming-mah" which incorporate both the nasal consonants ("M," "N" and "NG") which are sounded in the nose, and vowel sounds, which are resonated in the throat and mouth.[31]

The use of these sounds reflects the close tie which Miss Stafford makes between breath control and the use of strong resonance, for vocal carrying-power. Her exercises for these two areas overlap constantly and are basically similar, except that she emphasizes breath support more strongly to begin with, and later accentuates the accurate placement of sound in the nose and mouth, for full resonance.

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[29] See Appendix I, Exercise 4, p. 156.

[30] See Appendix I, Exercise 5, p. 156.

[31] See Appendix I, Exercise 6 and 7, p. 157.

The advanced breathing exercises also characterize Miss Stafford's emphasis on "emotion." She asks students to have definite "intentions" while making sounds, or counting numbers, during exhalation. The numbers from "One" to "Seven", for instance, could represent the thought: "I am leaving tomorrow," or "I do not want to see you again."[32]

Similarly, she asks students to "breathe in" moods like "sorrow," "joy" or "command" and to sustain these moods through spoken sentences. The sustaining of "moods" encourages the use of ususually strong breath energy, which provides strong support for voiced sounds. These exercises also connect breath support with the representation of emotions and mental attitudes and are therefore especially relevant to acting.

Miss Stafford finally applies breath control to poetic material. Students read poetry, pausing for breath at the end of each line, until they are able to sustain their breath over progressively longer spoken units.[33] Dr. Machlin uses very similar exercises for advanced breath control.

Miss Stafford includes exercises for stage laughter and weeping, which are based on "panting" breath and suitable vocalized sounds.[34] The exercises are almost identical to those of Dr. Machlin.

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[32] See Appendix I, Exercise 8, p. 157.

[33] See Appendix I, Exercises 10 and 11, p. 158.

Summary

The four teachers all aim at good rib expansion and the use of diaphragmatic "support" for breath control, but their exercises vary quite considerably, according to the particular teaching emphasis.

All the teachers use similar "panting" exercises to activate the diaphragm and they all include some form of "counting" or "pacing" exercises to extend breath exhalations. Apart from Dr. Machlin, the teachers use few "silent" breathing exercises, preferring to use voiced sounds at an early stage, which in my opinion is advantageous.

Dr. Machlin uses "listening" more extensively for breath control than she does for relaxation. Students attempt to "match" the breath units used by actors on recordings, as well as listening to identify good breath control. These exercises are helpful as long as they are used sparingly and do not lead to vocal imitations of the recorded actors.

Dr. Machlin's exercises for stage screaming, laughing and sobbing are a useful addition to the normal breathing exercises for actors, particularly for students who have difficulty in reproducing these emotional states technically.

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[34] See Appendix I, "Exercises for stage laughter and weeping," Exercises 1 and 2, p. 158.

Robert Parks and Miss Balos concentrate heavily on "muscle sense" in their breathing exercises. Professor Parks uses more strenuous exercises than Miss Balos and his exercises prepare actors to control their breath while performing vigorous movement. He also applies manipulation to students to develop the breathing process. The use of manipulation appears to be desirable mostly for students who are slow in responding to other breathing exercises.

Miss Balos uses "muscle sense" in a more relaxed fashion than Professor Parks because her chief aim is to produce relaxed vocal quality. Her exercises combining diaphragm movement with rib expansion are particularly effective.

Neither Professor Parks nor Miss Balos include stage techniques for screaming, laughing or sobbing in their breath control training. These techniques are included, instead, in acting classes.

Miss Stafford uses "emotion" to encourage students to prolong voiced sounds during breath exhalations. Her exercises also connect the use of breath support with the creation of strong resonance. Miss Stafford includes exercises for stage laughter and sobbing, based on the same principles as Dr. Machlin's, but she does not do exercises for the stage scream.

CHAPTER IV

PHONATION AND RESONANCE

Once students are able to produce a strong supply of breath to support vocal sound, Voice-teachers try to develop the maximum resonance, or "re-sounding" of the vocal tone created by the vibration of the vocal cords.

The initial vibration of the vocal cords, called phonation, is an almost entirely involuntary action, for which there are no direct exercises. Voice-teachers try to ensure that the throat muscles surrounding the vocal cords are relaxed and that the breath stream vibrates the vocal cords smoothly and evenly. Relaxation and breathing exercises help these aspects of clear and unhampered phonation.

For all practical purposes, teachers treat phonation and resonance as one area and concentrate on the amplification, rather than the initiation, of vocal tone.

The main areas in which vocal tone is resonated, or enlarged, are the throat, mouth and nasal passages.

Vowels and diphthongs, known as the "open" mouth sounds because the mouth is open during their formation, resonate chiefly in the mouth. The mouth and tongue are sufficiently flexible to shape different resonating chambers which give each vowel its characteristic sound.

The carrying-power of the voice rests mainly on the vowel sounds, because they can be held and enlarged for as long as necessary on an uninterrupted breath stream.

Most consonant sounds, on the other hand, are formed by momentary stoppages and releases of the breath stream by the tongue, lips and teeth, and these sounds have only brief duration.

Faulty placement of the tongue or poor lip-shaping tend to distort the formation of the vowel and diphthong sounds and reduce their full resonance and carry-power. Similarly, if the jaw is rigid, causing the lips to "spread" sideways rather than open widely, the vowels do not receive full oral resonance.

Voice-teachers therefore pay considerable attention to lip formation and movements of the tongue and jaw to see that vowel sounds are formed correctly.

The nose is the sole resonator of the sounds "M" "N" and "NG" which are known as the "nasal" consonants. These sounds all have a strong humming resonance, which adds carrying-power to all words which contain them.

To resonate these sounds correctly, the soft palate, in the rear upper part of the mouth, lowers, allowing the sound to enter the nasal passages. For other voiced sounds, the soft palate rises, closing off the entrance to the nasal passages, so that the sounds resonate only in the throat and mouth.

If the soft palate becomes too tense, the nasal consonants cannot enter the nose for resonation, resulting in flat and lifeless vocal tone.

At the opposite extreme, a "lazy" or inactive soft palate will allow both vowel and consonant sounds to resonate in the nose, which causes a muffled, over-nasal tone. A similar fault, known as nasality, frequently results from a rigid jaw, which hampers full oral resonance and forces the tone through the nose, causing a sharp and unpleasant voice quality.

To counteract faulty nasal resonance, Voice-teachers include exercises for easy jaw movement and specific exercises to activate the soft palate. Many resonance exercises are based either on humming sounds, to build nasal resonance, or the prolonging of vowel and diphthong sounds, to encourage full oral resonance.[1]

The four teachers in this study are closer in their approaches to resonance than they are in other Voice areas. They vary chiefly in the amount of attention which they give to any one aspect of resonance, such as lip formation, jaw movement, tongue placement or soft-palate exercises.

Dr. Machlin introduces this area, once again, with a period of "listening." She asks students to listen to recordings of both actors and non-actors to identify the use of resonance and to compare the quality of resonance in different voices.[2]

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[1] Arthur Lessac, Voice and Speech teacher at the State University of New York, Binghampton, differs from other Voice teachers in his approach to resonance exercises. Instead of including sounds which contain the nasal consonants, "M," "N," and "NG," to develop nasal resonance, he substitutes a sound which he calls the "Ybuzz." The sound is made by prolonging the "Y" sound (as in the word "Yes") and following it with the "E" sound (as in the word "Easy"). The sound is directed forward in the mouth, causing a vibratory sensation on the front of the hard palate, the gum ridge and the nasal bone. Mr. Lessac objects to the use of the usual nasal consonants on the grounds that the voice can become patterned on intrinsically nasal sounds, which could make vowel sounds strident and unpleasant. He prefers the "Ybuzz" because it is a non-nasal sound, made with the lips parted, which also causes "forward" vibration in the face area. The "Ybuzz" can, however, be used only in the lower third of the vocal range, without causing vocal strain, according to Mr. Lessac. The usefulness of the "Ybuzz" for developing resonance is therefore quite limited. In my opinion, the lengthening of the "Y" sound also tends to cause tightening of the throat muscles, which could defeat the production of easy and relaxed sound. While an overemphasis on the use of nasal consonants could lead to an unpleasant "nasal" sound quality in the voice, the teachers in this study all use both vowel sounds and nasal consonants for resonance exercises, which should balance the use of oral and nasal resonance. For a full description of Mr. Lessac's treatment of resonance, see Arthur Lessac, The Use and Training of the Human Voice (New York: DBS Publications,Inc., 1967), p. 79 ff.

Students also record their voices periodically while they are focussing on resonance and listen critically to the recordings to judge whether they are achieving better vocal quality.

These "listening" exercises are helpful as an initial guideline and as a method of checking progress, provided that the student does not become inhibited by listening to his own voice too frequently.

Dr. Machlin then works with exercises which combine humming and open vowel sounds with a variety of body movements. She includes bodily movements to counteract any possible tension as students learn to prolong sounds in a "singing"tone. The type of movement in these exercises varies from head-rolling and arm-swinging to rhythmic movement of the whole torso.[3]

To develop full resonant tone on vowel sounds, students sing sounds such as "Ah" and "Oh" in four-note groups, with piano accompaniment. The groups of notes are sung on one breath and varied up and down over the space of an octave.[4] Singing exercises of this kind help the student to develop clear and carrying tone on open vowel sounds.

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[2] See Appendix J, "Listening Exercises," Exercises 1 and 2, p. 160.

[3] See Appendix J, "Humming and Moving Exercises," Exercises 1, 2 and 3, p. 161.

Dr. Machlin's most impressive work in the area of resonance, however, is her use of transitions between sung and spoken sounds. These exercises are valuable because they assist students to bring the fullness of singing tone through into their speaking voices.

Dr. Machlin effects this transition between sung and spoken sounds with combinations of vowel sounds prefaced by the "M" sound. The joining of both "M" sounds and vowel sounds in sequences like "Mah maw, moh, mee, moo" encourages the simultaneous development of both oral and nasal resonance. Students first sing these sound combinations and then immediately speak the sounds, attempting to preserve the same fullness of sound in both the sung and spoken sequences.

Dr. Machlin uses different varieties of sounds to include the other nasal consonants, "N" and "NG" in these sound sequences, and words such as "my", "now" and "ding" which include both nasal consonants and vowel sounds.[5]

While students are performing these exercises, Dr. Machlin constantly stresses the need to shape the lips carefully for full resonance on vowel sounds and encourages students to move their jaws widely to increase oral resonance.

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[4] See Appendix J, "Extended Singing Exercises," Exercise 1, p. 162.

[5] See Appendix J, "Singing-Speaking Transition Exercises," Exercises 1 to 4, p. 162.

To activate the soft-palate, Dr. Machlin asks students to speak the sounds "NG" and "Ah" repeatedly in sequence. The combination of these two sounds, or the "NG" sound in combination with any vowel sound, causes the soft palate to lower to resonate the first sound in the nose, and rise to shut off the nasal passage for the following sound.[6] This exercise is a good means of making the soft palate move flexibly, to achieve a balance of oral and nasal resonance. The other teachers also use this exercise for the same purpose.

When students have learned to use resonance more fully through the exercises described above, they read poetry aloud prolonging the vowel and dipthong sounds slightly where the sense allows it.

The exercises which Robert Parks uses to develop resonance are based on the same principles as those of Dr. Machlin, but he lays more stress on "feeling" the vibrations of resonance through "muscle sense".

Students start by feeling the vibrations of resonance in the throat and face with their fingers while they are humming, or extending sounds composed of the nasal consonants.[7] As strong resonance produces vibrations which can be felt physically, it is certainly advantageous to explore the placement of resonance through physical sensation as well as listening.

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[6] See Appendix J, "Exercises for the Soft Palate," Exercises 1 and 2, p. 164.

[7] See Appendix K, Exercises 1 to 3, p. 165.

Professor Parks tells students to check the movement of the larynx by placing their fingers on their throats while they are producing vowel sounds.[8] His objective here is to discourage students from making strained upward or downward movements of the larynx, because these movements can narrow and constrict the area of throat resonance.

To make the lips and jaw open widely for oral resonance, Professor Parks instructs students to place corks between their teeth while they are making vowel sounds.[9] While this exercise achieves the objective of opening the lips and jaw, most students are able to do this effectively without the additional aid of corks.

Professor Parks extends nasal and oral resonance by using humming and vowel sounds for exercises performed in kneeling and standing positions. Students begin the exercise by kneeling on all fours, with their head hanging downwards. They hum continously, raising their heads upright to open their mouths on a variety of vowel sounds. This exercise is particularly useful because the initial downward position of the head forces the resonant vibrations to fall "forward" into the face, rather then resonating mainly in the throat, which reduces vocal carrying-power.

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[8] See Appendix K, Exercise 6, p. 166.

[9] See Appendix K, Exercise 5, p. 166.

The students repeat this exercise in a standing position, trying to retain the same "forward" placement of the resonant vibrations which they experienced while kneeling.[10]

Like Dr. Machlin, Professor Parks uses a piano to enlarge resonance through singing tone. He employs four or five-note combinations, with the student singing the sounds "Hum-mum" to each note to develop nasal resonance, or the word "Hello" for open oral resonance.[11] These exercises imply some degree of "listening" as well as "muscle sense" in order to match the musical notes on the piano.

In one exercise, Professor Parks also incorporates "intentions" similar to those used by Miss Stafford. Students face each other in pairs and "send" sounds like "Hum-mah" to each other with a definite thought or intention behind the sound.[12] Professor Parks includes these "intentions" so that students connect the use of arbitrary resonant sounds with the expression of emotions and thoughts. This approach is useful because there is a danger that exercises involving the use of isolated sounds may become meaningless drills without apparent connection to the speech and acting process.

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[10] See Appendix K, Exercise 4, p. 165.

[11] See Appendix K, Exercise 7, p. 166.

[12] See Appendix K, Exercise 8, p. 166.

Additional humming exercises include leg movements to loosen up the body and test the use of resonance when students have to move vigorously while speaking.[13]

To activate the soft palate, Professor Parks uses the same exercise as Dr. Machlin, alternating the "Ng" and "Ah" sounds.[14]

For advanced work in resonance, pairs of students sing alternate lines of a learned speech and speak the lines immediately afterwards. The objective of this exercise is to retain the same fullness of resonance in the sung and spoken sounds.[15] This exercise, which is a variation of Dr. Machlin's transitions from singing to speaking, is an excellent method of achieving fuller resonance.

Miss Rowena Balos uses combinations of nasal and vowel sounds in her basic exercises for resonance, but she includes more specific exercise for the tongue, lips and jaw than the other teachers.

Her method of demonstrating the different areas of resonance to students is unusually effective. She tells students to hum with their heads in three different positions: falling backwards, looking ahead and falling forwards, on their chests. In the first position, the strong vibrations of throat resonance predominate. Facing ahead, the vibrations occur most strongly on the teeth and lips, showing oral resonance. With the head falling forwards, the vibrations of nasal resonance predominate, felt in the nose and cheeks. This exercise, like many of Professor Parks', relies more on "muscle sense" than on hearing.[16]

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[13] See Appendix K, Exercises 9 and 10, p. 167

[14] See Appendix K, Exercise 12, p. 167

[15] See Appendix K, Exercise 13, p. 167.

In order to ensure that the tongue does not interfere with good oral resonance, Miss Balos exercises the tip, middle and back of the tongue to make it as flexible as possible. The exercises include drills on the "L" sound, which cause the tongue tip to move; "G" and "K" sounds, which raise the back of the tongue, and "E" sounds, which cause the centre of the tongue to rise.[17] Since faulty tongue positioning can obstruct oral resonance, these tongue exercises form a useful part of resonance exercises.

Miss Balos also concentrates on exercises to widen jaw movement, for full oral resonance.[18] Students massage the joints of the jaw with their fingers, widen the mouth "as if screaming silently", and shake the jaw loosely up and down. These exercises have the same effect as the jaw exercises used by Professor Parks, without the necessity of using extra aids, such as corks.

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[16] See Appendix L, Exercise 1, p. 168.

[17] See Appendix L, Exercise 4, p. 169.

[18] See Appendix L, Exercises 6, 7, and 8, p. 169.

Students loosen the larynx by moving it to and fro with their fingers while making sounds such as "Hi", "He" and "Ha". This exercise, to avoid tension and constricted throat resonance, is similar to Professor Parks' exercise for the same purpose.

Miss Balos encourages vigorous lip movements by telling students to "burr" their lips together "like a motor cycle", or to move their lips by making exaggerated "Bri", "Bray" or "Brai" sounds.[19]

For activating the soft palate, Miss Balos uses the same alternation of "Ng" and "Ah" sounds as the other teachers.[20]

Miss Balos proceeds with humming exercises incorporating body movements, like those of Dr. Machlin, although not as detailed or numerous.[21]

Like both Professor Parks and Dr. Machlin, Miss Balos uses a piano for more advanced resonance exercises. Students sing five-note combinations, alternating between nasal and vowel sounds.[22] When students read material, Miss Balos asks them to use vowel and nasal consonant sounds fully to achieve good resonant tone. She does not include singing-speaking transitions in her exercises, like Dr. Machlin and Professor Parks. In this respect, her resonance exercises are not, in my opinion, as comprehensive as those of the other teachers. Her specific exercises for the jaw, tongue and lips are, however, more thorough.

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[19] See Appendix L, Exercise 12, p. 170.

[20] See Appendix L, Exercise 3, p. 168.

[21] See Appendix L, Exercise 9, p. 169.

[22] See Appendix L, Exercise 11, p. 170.

Miss Stafford also believes in "feeling" resonance through "muscle sense" rather than "listening" to it. Some of her exercises feature "emotion" and "intentions", as well as "muscle sense".

She asks students to "feel" the different areas of resonance by placing their fingers on their lips, noses and throats, while they make prolonged "MMM" sounds.[23]

To show how resonance moves from the throat to the nose, Miss Stafford tells students to prolong the word "Dong". This word resonates initially in the throat and then progresses to full nasal resonance on the final "Ng" sound.[24]

Miss Stafford has the same exercise as Miss Balos to loosen the jaw, by massaging it and moving it freely,[25] and she uses the same soft palate exercise as the other teachers, based on the alternating "Ng" and "Ah" sounds.[26]

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[23] See Appendix M, Exercise 1, p. 171.

[24] See Appendix M, Exercise 2, p. 171.

[25] See Appendix M, Exercise 3, p. 171.

[26] See Appendix M, Exercise 4, p. 171.

In order to check that students are shaping their lips correctly for good oral resonance, Miss Stafford watches students individually while they say all the vowel and diphthong sounds.[27] She insists that students keep their tongue-tips behind their lower teeth for vowel sounds, so that the sound can resonate fully in the mouth with as little obstruction as possible. Miss Stafford's work for lip-shaping was especially detailed and thorough.

Some of Miss Stafford's resonance exercises, using only the prolonged "MMM" sound,[28] are related closely to breath control exercises, as I have mentioned in the previous chapter. While she is emphasizing resonance, Miss Stafford stresses the need to place the sound "forward" in the face "mask" rather than concentrating on the breath pressure which initiates the sound.

In more advanced exercises, Miss Stafford asks students to say strings of sounds containing nasal consonants and vowel sounds, such as "Man-meng-ming-mong-mung", with "intentions" behind the sounds.[29] She suggests that students think of a definite sentence like "I will not see you tomorrow", to give meaning and intonation to the sounds.

She also asks students to sustain specific moods, like "joy", "anger", or "despair" while they are making prolonged "MMM" sounds.[30]

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[27] See Appendix M, Exercise 5, p. 171.

[28] See Appendix M, Exercise 6, p. 172.

[29] See Appendix M, Exercise 8, p. 172.

These advanced exercises, containing "moods" and "intentions" typify Miss Stafford's use of "emotion" to create extra vocal energy for carrying-power of the voice, as well as linking the exercises with acting. The exercises are remarkably effective for producing strong and carrying tone.

To give the student an awareness of using resonance for projection, Miss Stafford sometimes suggests that the student "sends" the "MMM" sound to a specific point in the room, either in front or behind him.[31] This type of exercise helps to produce strong "forward" resonance although there is a possibility that the student will tense his throat in the effort to "send" the sounds for any considerable distance. Only very advanced students, in my view, are likely to benefit from this exercise.

Miss Stafford is the only teacher who does not use piano accompaniment for any of her resonance exercises. Students learn singing as a separate subject, which helps them to improve their vocal tone. Her approach, however, does not provide the important link between singing and spoken tone, which Dr. Machlin and Professor Parks effect through singing-and-speaking transition exercises.

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[30] See Appendix M, Exercise 7, p. 172.

[31] See Appendix M, Exercise 9, p. 172.

When students are reading poetry, as advanced exercises, Miss Stafford asks them to use full resonance on all nasal consonants and vowel sounds.

SUMMARY

The four teachers use many similar exercises, based on prolonged vowel or nasal consonant sounds, to develop resonance.

All four teachers use identical exercises for the soft palate, and their exercises for lip-shaping are similar, though they vary in number.

The basic aim of most exercises is a "forward" placement of resonance, in the mouth and nose, for good carrying-power.

The singing-speaking transition exercises of Dr. Machlin and Professor Parks appear to be an extremely effective method of developing full, resonant tone in the speaking voice.

Dr. Machlin achieves "forward" placement of resonance mainly through the additional breath power required for "singing" tone. She uses "listening" as a guideline for students, both initially and as a periodic means of checking progress. The "listening" exercises are useful, provided they are not used so frequently that the student becomes self-conscious or discouraged.

Robert Parks encourages "forward" placement of resonance by altering the head position, to make students aware of the sensation of strong vibrations in the face.

Miss Balos also concentrates on "feeling" head vibrations for "forward" placement, but she pays more attention than the other teachers to freeing the passages of resonance through specific exercises for the throat, jaw, lips and tongue.

Miss Stafford employs both "muscle sense" to develop strong resonant vibrations, and "emotion" to develop extra vocal energy for projection. Her methods appear to produce results very swiftly.

CHAPTER V

PITCH RANGE

Most Voice-teachers follow the training for vocal resonance with exercises to extend the pitch range of the voice, to add variety to vocal tone.

Pitch changes, from higher to lower tones in the voice, are caused by muscular actions which alter the tension and density of the vocal cords as they vibrate.

Increased tension and thinner mass of the vocal cords results in higher pitch, while decreased tension and thicker mass of the cords causes lower pitch.

Impulses from the central nervous system dictate the muscular actions which change the tension and mass of the vocal cords. These muscular actions are almost imperceptible kinesthetically and changes in pitch are heard, rather than felt, by the speaker.

Changes in pitch are related closely to changes in the speaker's mental and emotional attitude, and the use of pitch is almost inseparable from the communication of meaning and emphasis in speech. For this reason, most Voice-teachers introduce exercises for pitch development late in the training, to form a logical bridge with Speech-training.

Although Voice-teachers use some isolated sounds, or musical notes, in pitch exercises, they frequently include words and sentences to connect pitch range with speech.

Voice-teachers also tend to delay pitch training until students have learned to produce relaxed and resonant tone, within medium pitches, because over-use of high and low pitches can easily cause vocal strain.

Because the muscular actions which cause alterations in pitch cannot really be felt, "muscle sense" has little relevance to this area of Voice-training. Voice-teachers do, however, re-emphasize the relaxation of the throat muscles, to allow free and unhampered movement of the vocal cords.

The emphases of "listening" and "emotion" are both evident in methods of pitch training. Teachers emphasize "listening" so that students learn to recognize and match different musical and vocal pitches. Some teachers use "emotion" to show the student how different pitches reflect a variety of mental and emotional attitudes.

The four teachers in this study follow much the same procedure for developing pitch range, varying chiefly in the degree to which they emphasize "listening" or "emotion" in their exercises.

Two of the teachers--Dr. Machlin and Robert Parks--use a system of written pitch transcription to make their students aware of possible varieties in pitch and intonation. Students reproduce spoken pitches by placing a series of dots over written sentences to represent the approximate rise and fall of vocal pitch on each syllable.

These pitch transcriptions are based on Hermann Klinghardt's system of marking intonation[1], also known as the "Dot-and-Tail System." The transcripts resemble a simple form of musical notation.

Dr. Machlin begins exercises for pitch extension by teaching students to make pitch transcriptions of dramatic dialogue, or ordinary conversation, using the "Dot-and-Tail System."[2] She starts with these exercises to make students aware of the variety of pitch intonations which they could use when delivering material and to give them a means of planning definite pitch variations when they are preparing a poem or speech.

Dr. Machlin combines "listening" exercises with the use of pitch transcriptions. Students, for instance, transcribe the pitch variations used by actors on recordings and then try to reproduce the same pitch variations themselves.[3]

These exercises, although somewhat mechanical in my opinion, are helpful as an initial step, to make students aware of the expressive use of pitch, provided students do not use them excessively to the point of becoming imitative.

While students are learning to make transcriptions, Dr. Machlin uses singing exercises and combined speech-singing transition exercises for pitch development.

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[1] For a fuller description of Klinghardt's system of intonation marking, see Appendix N, p. 173.

[2] See Appendix O, Exercises 1 and 3, p. 176.

[3] See Appendix O, Exercise 2, p. 176.

Firstly, students sing the "Ah" sound, matching musical notes on the piano over the space of an octave. Next, they substitute the words "One, two, three, four, five, six, seven, eight" for the "Ah" sound, and sing the words up and down over the same notes.[4]

Dr. Machlin then makes a transition between singing and speaking by asking students to sing the numbers from "One" to "Eight" over an octave and to speak each number in the same pitch immediately after singing it.[5]

In more advanced exercises, students alternately sing and speak a series of numbers in rapid succession, resembling the rise and fall of pitch over an entire sentence.[6]

These transitions between singing and speaking, which are similar to those which Dr. Machlin uses to develop resonance, are a valuable method for stretching pitch range.

Dr. Machlin develops "sliding" changes in pitch by asking students to make long, continuous rises and falls in pitch on the following sounds: "Mah, maw, moh, moo, mow, my, may, me."[7] This series of sounds begins with vowel sounds formed at the back of the mouth, which are naturally low in pitch, and ends with high "front" vowels, which are high in pitch.

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[4] See Appendix O, Exercise 4, p. 176.

[5] See Appendix O, Exercise 5, p. 177.

[6] See Appendix O, Exercise 6, p. 177.

[7] See Appendix O, Exercise 7, p. 178.

The other teachers use similar exercises for "sliding" sounds, which are useful because they are closer to the "sliding" character of most spoken pitches than musical notes.

More advanced students work in pairs to practice pitch "builds." For this exercise, each student speaks a single word, such as "Yes" or "No" in progressively higher pitches until both students have reached the top of their vocal range.[8] The process is then reversed, so that they speak in descending pitches on each word until they reach the bottom of their Voice range. All the teachers use similar forms of the same exercise, which encourages the student to explore the full range of pitch levels in his voice, between the highest and lowest extremes.

Dr. Machlin also tells students to experiment with the use of a variety of pitches on longer phrases such as "Oh, no not again! I can't take it!"[9]

Finally, students read aloud from poetry and dramatic material which demands considerable use of pitch variation for its effect.[10]

Dr. Machlin includes further "listening" exercises later in the training to show students how high and low pitches can be used effectively as aids to characterization in acting. These exercises involve listening to character voices used by actors in recorded plays.[11]

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[8] See Appendix O, Exercise 9, p. 178.

[9] See Appendix O, Exercise 8, p. 178.

[10] See Appendix O, Exercise 10, p. 178.

Robert Parks' approach to pitch development is very similar to Dr. Machlin's work in this area.

Although he does not ask students to listen to recordings of plays, he suggests that they listen for unusual pitch qualities in other voices which they may be able to incorporate into voice characterizations for acting.[12] He also begins pitch development with pitch transcriptions, using Klinghardt's intonation markings, to show students how pitch can be varied to convey different meanings.[13]

Like Dr. Machlin, Professor Parks works initially with a piano to train students to reproduce different musical pitches. Students match the musical notes over the space of about an octave, using the sounds "Ha," "He," or "Hi." These sounds are then alternated with "EE" and "Ah" sounds.[14] Students also speak the sounds in the same pitches after singing them, on the same principle as Dr. Machlin's singing-speaking transitions.

After using single sounds for singing-speaking transition exercises, Professor Parks asks students to sustain longer phrases and sentences in sung and spoken pitches.[15]

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[11] See Appendix O, Exercise 11, p. 179.

[12] See Appendix P, Exercise 1, p. 180.

[13] See Appendix P, Exercise 2, p. 180.

[14] See Appendix P, Exercises 3 and 4, p. 180.

When they are able to sustain longer phrases in a single pitch, both in sung and spoken sequences, students attempt to introduce variety of pitch into the phrases, even though the overall pitch placement may be extremely high or low.[16]

Professor Parks emphasizes the use of varied pitch because he maintains that students tend frequently to raise their overall pitch level and reduce variety in pitch when they are asked to "project" their voices on stage. The use of pitch variations in higher voice levels, particularly, is therefore a useful preparation for "projected" voice use on stage.

While students are using higher pitch levels, Professor Parks sometimes loosens their neck muscles by massaging them with his fingers, to ensure that students are not tensing the throat to produce these sounds. This limited kind of manipulation is the only use of "muscle sense" by Professor Parks for pitch exercises.

Professor Parks develops "sliding" pitch with an exercise in which students "swoop" from their lowest pitches to their highest on a single word, such as "Woo." This exercise is almost identical with Dr. Machlin's exercise for sliding pitch, though Professor Parks does not use the wide variety of vowel sounds contained in Dr. Machlin's exercise.[17]

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[15] See Appendix P, Exercise 5, p. 181.

[16] See Appendix P, Exercise 7, p. 181.

For more advanced students, Professor Parks uses a more elaborate type of singing-speaking transition exercise, which he calls an "Opera" exercise.[18] Students sing alternate lines of a learned speech to each other, improvising the melody, and simultaneously perform the actions of a simple scene, such as laying a breakfast table or boarding a bus. After singing the lines, they repeat the scene in spoken dialogue, trying to maintain the wide variations in pitch which they used in the sung version.

This exercise is particularly imaginative and effective because it links both sung and spoken pitches with a simple form of improvised acting.

Advanced students work with a variety of dramatic material to explore the use of different pitch intonations.

Miss Rowena Balos emphasizes "emotion" in many of her exercises to develop pitch range. Some of her basic exercises, however, resemble those used by Dr. Machlin and Professor Parks.

As an initial exercise, she tells students to explore the placement of high and low sounds using only silent breath.[19] This exercise is advantangeous because students learn to adjust the organs of speech for high and low pitches without the danger of irritating the vocal cords, since the cords do not vibrate to create sound.

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[17] See Appendix P, Exercise 6, p. 181.

[18] See Appendix P, Exercise 9, p. 181.

When students match musical pitches on the piano, Miss Balos stresses the "emotional" quality suggested by higher or lower notes. She suggests, for instance, that students equate low notes with "laziness" or "malevolence" and higher notes with "excitement" or "fear".[20]

Similarly, when students sing isolated sounds, such as "Ha", with piano accompaniment, Miss Balos instructs them to "join the sounds together like a thought" and to "smile" while they are making the sounds.[21]

These exercises, then, are similar to those used by Dr. Machlin and Professor Parks insofar as students match musical notes on the piano, but the exercises also remind the student of the ultimate purpose of pitch use, to reflect thoughts and emotional states.

In exercises without a piano, Miss Balos sometimes tells students to "tickle" her with a sound or to "get someone out of the room with a sound". This is an oblique method of asking the student to create sounds in different pitches and intensities.[22] The exercise helps to stimulate the actor's imagination and provides a less rigid form of exercise than the standard matching of musical pitches.

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[19] See Appendix Q, Exercise 1, p. 182.

[20] See Appendix Q, Exercise 2, p. 182.

[21] See Appendix Q, Exercise 4, p. 182.

In this type of exercise, Miss Balos stresses that students should not copy sounds which she makes, but should try to develop their own sounds.

When students are making isolated sounds, such as "EE" or "Ah" in high pitches, Miss Balos tells them to bend their bodies from the waist and shake their necks and torsos, to ensure that they are not using undue tension to create the sounds.[23] This is the only evidence of the use of "muscle sense" by Miss Balos for pitch training.

The aim of "shaking out the body" in this exercise is the same as Professor Parks' manipulation of students to loosen their neck muscles during pitch exercises, to avoid unnecessary tension. As in other areas of Voice-training, Miss Balos prefers students to achieve muscular relaxation without providing direct help herself, through manipulation.

To develop "sliding" pitch sounds, Miss Balos uses the same exercise as the other teachers. Students make continuous pitch "slides" from lower to higher pitches, and vice versa, using "EE" and "Ah" sounds.[24]

Miss Balos also includes exercises for pitch "builds" which are similar to those used by Dr. Machlin and Professor Parks. Students "answer" words or phrases which Miss Balos speaks in different pitches and "moods." For instance, Miss Balos says the phrase, "Will you?" in a variety of "moods" and pitches, to which the students reply "Yes!" or "No!" in an appropriate pitch.[25] Miss Balos tends to do this exercise in a selection of random pitches, rather than continuously rising or falling pitches.

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[22] See Appendix Q, Exercise 3, p. 183.

[23] See Appendix Q, Exercise 6, p. 184.

[24] See Appendix Q, Exercise 7, p. 184.

In a variation of this exercise, Miss Balos says the word "Hi!" to the students in a variety of "moods" and intensities, to which the students give an appropriately-pitched response, using the same word.[26]

Advanced students use both prepared material and improvised scenes with strong "emotional" demands, to achieve a controlled use of pitch for acting.

Miss Stafford, like Miss Balos, favours the use of "emotion" in pitch exercises.

She includes fewer exercises specifically for pitch than the other teachers because she introduces pitch use at an earlier stage, through the use of "moods" and "emotion" in breathing and resonance exercises.[27]

Miss stafford explains that when students make the

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[25] See Appendix Q, Exercise 8, p. 184.

[26] See Appendix Q, Exercise 9, p. 184.

[27] See Appendix I, Exercises 6 and 8, and Appendix M, Exercise 7 and 8, pp. 157 and 172.

"MMM" sound in resonance exercises, different "moods" such as "Joy" or "Sadness" alter the pitch of the sound, as well as encouraging ~~a~~ "forward" placement of resonance.

Although she uses the same "MMM" sound in some pitch exercises too, Miss Stafford suggests a wider variety of "moods" such as "Fear", "Anger", "Arrogance" and "Sarcasm", which call for more extreme changes in pitch than the resonance exercises.[28] These exercises are effective for advanced students, to connect pitch use with "emotional" states for acting, but they do not encourage the use of as many gradations of pitch as, for instance, the singing-speaking transition exercises of Dr. Machlin and Professor Parks.

Miss Stafford relies a great deal on work done in singing classes to develop the student's ability to match musical pitches. She does, however, include occasional exercises in which she uses a piano to make students match random musical notes, or explore the middle ranges in their voices by singing notes that are close to the "middle" pitches in their voices.[29]

She also asks students to say strings of sounds like: "Man, men, min, mon, mun" with definite "thoughts" or "intentions" behind the sounds, so that the pitch intonation of the sounds alters according to the "intention" which the student has in mind.[30] This exercise, again, is very similar to some of her exercises for resonance.

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[28] See Appendix R, Exercise 3, p. 185.

[29] See Appendix R, Exercise 1, p. 185.

For pitch "builds," students repeat single words, such as "Yes" or "No" in progessively higher pitches, to reach the top of their range, or speak the word in progressively lower pitches to reach the bottom of their range.[31] The exercise is similar to those used by the other teachers for the same purpose.

Although Miss Stafford's use of "emotion" is an effective method of linking pitch use with acting, particularly for advanced students, her work in pitch development appeared to be less detailed and thorough than the other teachers.

Summary

Although the four teachers use some similar exercises for pitch development, Dr. Machlin and Professor Parks emphasize "listening" in their exercises, while Miss Balos and Miss Stafford favour "emotion" in their approaches.

Dr. Machlin and Professor Parks use very similar exercises. Both teachers use pitch transcriptions, which help students to become aware, initially, of the use of pitch for vocal variety. An extended use of these exercises, however, would make students imitative and unoriginal, in my opinion.

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[30] See Appendix R, Exercise 4, p. 186.

[31] See Appendix R, Exercise 5, p. 186.

Dr. Machlin and Professor Parks also use similar singing-speaking transition exercises which provide a useful link between sung and spoken pitches and help to stretch the student's pitch range.

Both teachers have the same exercise for developing "sliding" pitch, although they use different words, or sounds for the exercise. Dr. Machlin's use of "high" and "low" placed vowels for "sliding" pitch is a particularly comprehensive exercise because students learn to "slide" pitch on all the vowel sounds in spoken English. The other teachers use only one or two different vowel sounds for exercises in "sliding" pitch.

Professor Parks' "Opera" exercise is an extremely useful variation of the singing-speaking transition exercises, because it involves a simple form of movement and acting as well as developing pitch range.

Miss Balos and Miss Stafford both emphasize "emotion" in their pitch exercises, which is an effective method of showing students how pitch use can be incorporated into acting.

Miss Balos links "moods" with the matching of musical pitches more thoroughly than Miss Stafford, by using a piano in many exercises.

Miss Stafford, however, introduces pitch use earlier than the other teachers by incorporating "mood" pitch changes into some of her resonance and breathing exercises.

Miss Balos uses more "random" pitches and indirect suggestions to the students than the other teachers, to develop pitch variety. Her exercises are especially imaginative and connect pitch use effectively with acting.

Both Miss Balos and Miss Stafford use exercises for pitch "builds" which are similar to those of the other teachers. Miss Balos also includes the same exercise as Dr. Machlin and Professor Parks for "sliding" pitch.

Miss Balos and Professor Parks are the only teachers who use any form of "muscle sense" in pitch exercises. Their use of "muscle sense" is restricted to an additional relaxation exercise, to help students to avoid neck tension while they are developing pitch range. Professor Parks uses direct manipulation to loosen the neck muscles, while Miss Balos tells students to "shake" out their necks and torsos to loosen the muscles.

CHAPTER VI

PROJECTION

After students have developed their voices fully through exercises for relaxation, breath control, resonance and pitch range, Voice-teachers usually complete the training with exercises for voice "projection," so that the student can learn to adapt his voice level for audibility in different working spaces.

Voice-teachers do not generally regard "projection" as a separate area of Voice-training, but prefer to think of it as the combined use of all the elements of Voice-training, discussed previously, to achieve full and carrying vocal sound.

Many Voice-teachers are reluctant to use the word "projection" because they maintain that it encourages students to "push" or "force" the voice to achieve greater volume. They believe that if the actor is relaxed and his use of breath control, resonance and pitch range is developed fully, voice "projection" will "take care of itself."

Although there is some truth in this contention, most Voice-teachers nevertheless include additional exercises to help actors to project their voices in spaces of varying size.

The four teachers in this study include similar exercises for projection in their teaching methods, but they differ considerably in the extent to which they use them.

Dr. Machlin believes that actors should learn to adjust their speech energy according to the variable acoustics of the space in which they are working.

She uses both different spaces and tape-recorders as aids for achieving good projection.

Whenever possible, she works in areas varying from small theatres to large halls, to accustom students to using their voices in buildings with different acoustics. This is a useful method of showing students how to adjust their vocal energy according to the space in which they are working.

In a large classroom, Dr. Machlin uses an exercise in which two actors face each other, a few feet apart, and gradually retreat backwards in opposite directions while speaking alternate lines of dialogue to each other. The aim of the exercise is for the actors to maintain the same degree of vocal carrying-power throughout the change of distance between them.

Using a larger theatre, Dr. Machlin places half the students on the stage and the other half in the back row of the balcony. For practice material, the students use a poem or speech which they know by heart.

An actor on stage starts with the first line, or sentence, speaking it to the actor opposite him in the balcony, who replies with the second line. This procedure continues, with alternate lines from the stage and balcony, until all the students have spoken. Dr. Machlin asks students to achieve projection with easy naturalness of mouth and breath action and to avoid shouting or straining.

Students also present full speeches individually from the stage to other students sitting at the back of the theatre to test their use of projection and to discover whether they are using distracting mouth movements or gestures while they are performing.

Dr. Machlin asks students to test their power of projection by recording a speech on a tape recorder with the microphone placed 10 feet away from them. They play back the recording to assess their achievement in projection and on successive repetitions they increase their distance from the microphone while trying to maintain the same volume and clarity of the initial recording.

Dr. Machlin's exercises for projection are more numerous than those used by other teachers and they are an effective method of making students aware of the need to adjust their voices to a variety of working spaces.

Professor Parks does not like using the word "projection" because he feels that the word suggests that the voice can be pushed or extended beyond the actor "like tossing a baseball."

He maintains that actors tend to strive for pure volume if they are asked to "project" their voices and as a result they raise their general pitch level and lose vocal variety. He says that unless the actor can retain a variety of vocal tone, he will not achieve a believable extension of the voice on the stage.

Professor Parks therefore encourages actors to increase vocal intensity on lower pitches, particularly, to achieve greater carrying-power. He tells students to give greater "intensity" to sounds, rather than referring to "projection".

Since actors frequently tend to reduce their breath energy on lower-pitched sounds, with a consequent loss in audibility, this is an aspect of projection which requires emphasis.

While students are working on pitch and resonance exercises, Professor Parks reminds them constantly to preserve vocal variety, even if the overall pitch placement is high or falsetto.

More advanced students work occasionally in larger spaces, such as halls and theatres, to make them aware of the vocal adjustments which they need to make to be heard in a larger area. Professor Parks does not do this as frequently as Dr. Machlin.

Like Professor Parks, Miss Balos does not refer directly to "projection" in her teaching approach. She prefers to ask students to "let go and share their voices", because she believes that the term "projection" tempts students to force their voices in order to be heard. This "pushing" or "forcing" of the voice negates the student's ability to produce the voice in a relaxed manner, says Miss Balos.

Miss Balos believes that if students use resonance fully, vocal sound will carry without undue pressure. She says that the development of resonance is a gradual process and she therefore does not tell students to work specifically on volume or projection.

Apart from telling students to "share" their voices, Miss Balos sometimes tells students to imagine that they are addressing someone at a greater distance than usual, or that the space they are occupying is larger than it really is. She does not, however, make a point of trying to work in rooms of different sizes, or theatres, to test projection.

Although Miss Balos' concern that students should not "push" their voices is quite valid, I do not think that her approach helps the student to adjust his voice to different physical spaces.

Miss Kathleen Stafford uses the word "focus" instead of "projection". She explains the term by saying that an actor should learn to "focus" his voice to the back of a theatre in the same way that an archer "focuses" on a target, rather than on his bow and arrow. This is a mental concept of "where the actor is trying to get his voice".

Like Professor Parks, Miss Stafford feels that it is particularly important to stress the need for extra breath when the actor uses the lower levels of his voice on stage.

She maintains that if the student uses a strong and disciplined stream of breath to support his voice, he will not revert to a low, conversational vocal level which will be inaudible in the theatre.

Miss Stafford believes that students need a great deal of practice in projection before being exposed to performances. She says that if actors are not sufficiently used to projecting their voices without strain, the additional nervousness experienced in performance can easily cause the actor to use high pitches, with little vocal variety or "colouring".

Miss Stafford frequently uses alterations in space between herself and the students to encourage projection. She will, for instance, sit some distance behind the students, or in front of them, and tell them to "reach" her with sounds or words.

In other exercises, Miss Stafford tells students to "focus" their voices towards a distant wall or "outside the door".

When the space is available, she uses a theatre and asks the more advanced students to deliver material either facing out towards the auditorium or "up-stage", with their backs to the audience.

These exercises, which are similar to those used by Dr. Machlin, are a useful method of developing projected speech in a variety of spaces, particularly for advanced students.

Summary

Apart from Dr. Machlin, the teachers in this study are reluctant to use the word "projection".

Robert Parks prefers the word "intensity", Miss Balos tells students to "let go and share their voices", and Miss Stafford uses the term "focus".

These teachers avoid using the word "projection" because they feel it encourages students to "push" or "force" their voices, rather than using strong breath control and well-placed resonance to achieve good vocal carrying-power.

Although there is certainly truth in this contention, directors frequently ask actors to "project" when they are working in the theatre and in my opinion there is some value in making the student become accustomed to the term, so that he can learn to adjust his vocal energy in a relaxed manner while he is still in training.

Apart from their use of different terminology, the four teachers all use some alterations in space, either real or imaginary, to develop projection, though they do so to a markedly different degree.

Dr. Machlin uses different spaces far more frequently than the other teachers. In my view, her argument that an actor needs to learn to adjust his vocal energy to different physical spaces is extremely valid. Her use of tape recorders appears to be a limited method of testing projection because tape recordings can only reproduce sounds satisfactorily over comparatively short distances.

Kathleen Stafford also works a great deal on projection both by asking students to "focus" their voices during resonance and pitch exercises, and by using alterations of space.

Robert Parks uses fewer alterations of space for projection exercises and Miss Balos uses almost none at all.

Although Professor Parks and Miss Balos work indirectly on projection, by encouraging students to use greater breath energy and full resonance, advanced students would benefit, in my opinion, from a greater use of different working spaces than these teachers provide in their teaching approaches.

CHAPTER VII

SUMMARY AND CONCLUSION

From the detailed examination of their teaching methods for Voice-development, it is apparent that the four teachers in this study vary in their teaching approaches according to their use of "listening", "muscle sense" and "emotion".

In spite of these different emphases, all four teachers use a considerable number of similar, and even identical, exercises for Voice-training.

In my view, none of the three types of teaching emphasis can be applied unreservedly to all areas of Voice-development, although each type of emphasis is useful at some stage in the training. In almost all Voice areas, a mixture of the different types of emphasis is advantageous, in my opinion, in order to provide a comprehensive and well-rounded training. An exception to this is the type of manipulation used by Professor Parks which requires special training and cannot therefore be incorporated easily into other training methods.

"Muscle sense" can be applied most fully in the area of body alignment and relaxation. Exercises for body alignment rely entirely on "muscle sense" and the other emphases do not apply in this area. "Muscle sense" is the predominant emphasis in relaxation exercises as well, but "listening" and "emotion" can also be used effectively in this area, to a lesser degree.

The approaches of Miss Balos and Professor Parks supply the most effective and comprehensive exercises for body alignment. The two other teachers either use very few exercises for this purpose or depend on movement teachers to correct body alignment.

Dr. Machlin relies entirely on work done in movement classes to correct body alignment. Miss Stafford includes only three spine-stretching exercises[1] in her method. Although Miss Stafford's exercises are useful for straightening the spinal column, they are not as complete as the exercises used by Miss Balos and Professor Parks, which also encourage good balance and deportment as well as exercising the spine.

Professor Parks' series of exercises for spinal movement and general deportment[2] are particularly effective and Miss Balos' exercises[3] are excellent for developing good spinal alignment and bodily balance.

The exercises of both these teachers could be combined to correct spinal alignment and to develop the student's sense of balance and posture, excluding Professor

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[1] See Appendix E, Exercises for body alignment, 1 to 3, p. 138.

[2] See Appendix C, Body alignment exercises 1 to 12, p. 131.

[3] See Appendix D, Body alignment exercises, 1 to 6, p. 136.

Parks' use of manipulation for spinal alignment, which requires special training in the Alexander Technique.

The type of manipulation used by Professor Parks is most applicable, in my opinion, to more severe spinal disorders, and his other exercises for body alignment, which do not require manipulation, can be incorporated easily into other Voice-training programs.

In the area of relaxation, Dr. Machlin's "listening" exercises,[4] to identify relaxed vocal quality, are a useful first step, in my opinion, to show the student the ultimate purpose of relaxation exercises.

Most of the basic relaxation exercises used by all four teachers, involve the use of alternate tension and relaxation of the muscles throughout the body, with particular attention to the neck, jaw and face muscles.

Dr. Machlin's series of tension-and-release exercises[5] is more detailed and effective than those of the other teachers, because the exercises involve every part of the body, from head to toe. The other three teachers base their exercises on the same principle as Dr. Machlin, but they are more selective in their use of tension-and-release exercises and do not attempt to eliminate bodily tensions as methodically as Dr. Machlin.

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[4] See Appendix B, Listening Exercises 1 and 2, p. 123.

[5] See Appendix B, Body relaxation exercises 1 to 9, p. 123.

Dr. Machlin also includes different versions of her tension-and-release exercises,[6] adapted to sitting and standing positions, which are convenient for teachers who have to work in a confined space. The exercises used by the other three teachers are all performed lying down.

All four teachers use exercises to energize the body, and, in Miss Stafford's approach, to stimulate mental activity as well. Ideally, energization exercises should serve both functions, in my opinion.

Dr. Machlin's series of energization exercises[7] are more detailed and numerous than those of the other teachers and are the most effective method of energizing the body after relaxation exercises. Dr. Machlin's exercises do not, however, awaken the student's imagination or provide any link with acting through "emotion".

In addition to Dr. Machlin's energization exercises therefore, Miss Stafford's exercises containing "intentions" and "thoughts"[8] can be added usefully, to link the energization exercises with acting and to stimulate the student's imagination as well as energizing the body after relaxation.

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[6] See Appendix B, Sitting down relaxation exercises 1 to 6, p. 126, and Standing relaxation exercises 1 to 7, p. 127.

[7] See Appendix B, Transition exercises 1 to 6, p. 128.

[8] See Appendix E, Energization exercises 1 to 5, p. 140

Miss Stafford's "Cat-and-mouse" exercise[9] is a particularly helpful method of incorporating a simple type of role-playing into energization exercises.

Although Professor Parks' relaxation exercises are particularly effective for releasing stubborn tensions, his extensive use of manipulation and massage in this area makes his approach more difficult to incorporate into other teaching methods.

Two exercises used only by Miss Balos are especially effective for relaxation. In the first exercise,[10] the student lies on the floor while a second student holds the head of the student lying down and "rolls" it to and fro to relieve neck tension. After an initial demonstration by the teacher, students can perform this exercise in pairs, without further help from the teacher.

Miss Balos' exercise[11] in which students recite speeches while hanging down from the waist is an excellent method of linking relaxation exercises with "open" and relaxed vocal quality, because the throat muscles can be relaxed more easily in a "hanging" than in an upright position.

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[9] See Appendix E, "Cat and Mouse exercise," p. 140.

[10] See Appendix D, Relaxation exercise 3, p. 134.

[11] See Appendix D, Relaxation exercise 14, p. 135.

"Muscle sense", "listening" and "emotion" can thus all be used to advantage in relaxation exercises, although the strongest emphasis should be on "muscle sense", in my opinion, as the primary objective of relaxation exercises is the removal of unnecessary bodily tensions.

All three types of emphasis are useful for different stages in breath control training.

Dr. Machlin's initial "listening" exercise[12] is a helpful method of showing the beginning student the purpose and application of extended breath control. Dr. Machlin's more advanced "listening" exercises, in which students attempt to match the breathing patterns used by actors on recordings, are less useful, in my opinion, because they could make students imitative and unoriginal.

The "muscle sense" exercises used by Professor Parks[13] and Miss Balos[14] are the most effective method of showing students how the ribs and diaphragm move in extended breathing, because students can become aware of these bodily movements more easily through a sense of touch than through "listening".

All four teachers use almost identical "panting", "counting" and "pacing" exercises to develop diaphragm movement and rib expansion and their exercises of this kind are equally effective. Of this type of exercise, Miss Balos' single exercise[15] which combines both diaphragm movement and rib expansion is superior to the other exercises because it combines two aspects of breath control in one exercise.

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[12] See Appendix F, Listening exercise 2, p. 141.

[13] See Appendix G, exercises 1 to 5, p. 150.

[14] See Appendix H, exercises 1 to 3, p. 154.

In addition to "panting", "counting" and "pacing" exercises, Professor Parks uses a considerable amount of manipulation to encourage free movement of the diaphragm and ribs. This type of manipulation, again, requires special training in the Alexander Technique and cannot be incorporated readily into other teaching approaches. In my opinion, this type of manipulation is only necessary for students who have particular difficulty in responding to the standard breathing exercises.

More advanced students would benefit greatly from Miss Stafford's exercises to sustain "moods" through numbers and sentences[16], because these exercises both increase the use of breath energy and link the exercises for breath control with the sustaining of "moods" for acting.

Dr. Machlin's exercises for sustaining breath over progressively longer spoken units[17] are also useful for advanced students, but they are not as effective as Miss Stafford's "mood" exercises because they do not include any use of "emotion" and therefore have less relevance to acting.

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[15] See Appendix H, exercise 5, p. 155.

[16] See Appendix I, exercises 6 and 8, p. 157.

[17] See Appendix F, "Breath exercises with strong inhalation followed by released exhalation in reading", exercises 1 to 4, p. 145.

The "fencing" exercise[18] used by Professor Parks is a useful method of testing the actor's command of relaxed breath control while performing movement. This is a more useful exercise, in my opinion, than Miss Balos' "sighing breath" exercise[19], which helps to develop relaxed vocal quality, but does not challenge the actor's use of breath in an acting situation which calls for vigorous movement.

Dr. Machlin's exercises for the stage scream[20] and for laughing and sobbing on stage[21] are a valuable addition to breath control exercises for actors. These exercises can be incorporated easily into Voice classes. Apart from Miss Stafford, who follows a procedure similar to Dr. Machlin for laughing and sobbing on stage[22], the other teachers do not include exercises for these techniques in Voice classes.

A mixture of "listening" and "muscle sense" is desirable, in my view, in exercises for developing resonance.

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[18] See Appendix G, exercise 18, p. 153.

[19] See Appendix H, exercise 9, p. 155.

[20] See Appendix F, Exercises for developing the stage scream, exercises 1 to 8, p. 146.

[21] See Appendix F, Exercises for laughing and sobbing, 1 to 8, p. 148.

[22] See Appendix I, Exercises for laughing and weeping, 1 and 2, p. 158.

"Emotion" can be incorporated, to a lesser degree, into advanced exercises in this area.

Dr. Machlin's "listening" exercises[23] help the beginning student, once again, to recognize resonant quality in other voices, and are also useful as periodic checks to assess the development of resonance in the student's own voice.

Since resonance is "felt" as well as "heard", the initial exercises of Professor Parks[24] and Miss Balos[25] in which students feel resonant vibrations kinesthetically are equally valid and useful and can be used in combination with "listening" exercises.

Of the exercises used by Professor Parks and Miss Balos to identify resonant vibrations, Miss Balos' exercise combining humming sounds with head movement[26] is particularly effective, because it enables students to feel the vibrations moving from one resonance "centre" to another.

Professor Parks' exercises for identifying resonance are slightly less effective because the resonance "centres" are "felt" separately by the student and are not interconnected in a single exercise.

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[23] See Appendix J, Listening exercises 1 and 2, p. 160.

[24] See Appendix K, exercises 1 to 3, p. 165.

[25] See Appendix L, exercises 1 and 2, p. 168.

[26] See Appendix L, exercise 1, p. 168.

Dr. Machlin's method of developing resonance through singing-speaking transition exercises[27] is exceptionally effective because students learn to bring the fullness of singing tone into their speaking voices. These exercises focus mostly on "listening".

Professor Parks uses similar singing-speaking transition exercises[28], but he also adds exercises[29] which emphasize "muscle sense" so that students both "feel" and "hear" resonance. His use of both singing-speaking transitions as well as "muscle sense" exercises is the best approach to achieving full resonance, in my opinion.

Miss Balos and Miss Stafford omit singing-speaking exercises from their approaches, which, in my view, makes their training in this area less complete than that of Dr. Machlin or Professor Parks.

However, Miss Balos' exercises[30] for lip, tongue and jaw movement, to increase oral resonance, are more detailed and effective than those of the other teachers and can be incorporated easily in other teaching methods.

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[27] See Appendix J, "Singing-speaking transitions", exercises 1 to 4, p. 162.

[28] See Appendix K, exercises 7 and 13, p. 166-167.

[29] See Appendix K, exercises 4 and 6, p. 165-166

[30] See Appendix L, exercises 4,6,7,8 and 12, p. 169.

All four teachers use the same exercise[31] for activating the soft palate, for nasal resonance, and the exercises are equally effective.

For advanced students, Professor Parks' singing-speaking exercise[32], in which students alternately sing and speak lines of learned dramatic material, is an excellent method of extending resonance exercises into a simple form of acted scene.

Miss Stafford's resonance exercises employing "moods"[33] are extremely helpful, both for bringing resonance "forward" into the face "mask" and for linking resonance exercises with acting. However, since these exercises are aimed primarily at achieving projection and because they may lead to "forcing" resonance, they should not be attempted until students have developed resonance through more relaxed resonance exercises, such as the singing-speaking transitions referred to above.

In the area of pitch range, "listening" is helpful for beginning students, in my opinion, and "emotion" is useful for more advanced students.

The singing-speaking transition exercises used by

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[31] See Appendix J, exercise 1; Appendix K, exercise 12; Appendix L, exercise 3 and Appendix M, exercise 4.

[32] See Appendix K, exercise 13, p. 167.

[33] See Appendix M, exercises 7 and 8, p. 172.

Dr. Machlin and Professor Parks are an outstanding method of developing a wide range of pitch in the speaking voice because they encourage students to explore the use of a great variety of musical pitches which they do not normally use in their speaking voices.

Dr. Machlin's singing-speaking transition exercises[34], using a piano, are slightly more varied than those used by Professor Parks[35], but both approaches provide a good method of stretching pitch range in the speaking voice.

The exercises used by these two teachers are particularly useful for beginning students, because the students can develop pitch range in a controlled manner by matching musical pitches, rather than reacting to "emotional" suggestions, which could lead to an uncontrolled and even harmful use of the voice.

Miss Balos' approach, using "moods"[36] and random pitches[37], is an excellent method of enabling more advanced students to connect pitch use with acting, once they have developed a wide range of pitch through more "mechanical" pitch exercises.

Apart from her pitch exercise using silent breath[38], Miss Balos' exercises are not suitable for beginning students, in my opinion, because they do not encourage such a wide use of pitch as those of Dr. Machlin and Professor Parks.

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[34] See Appendix O, exercises 5 and 6, p. 177.

[35] See Appendix P, exercises 3 and 5, p. 180.

[36] See Appendix Q, exercise 2, p. 183.

[37] See Appendix Q, exercises 3 and 9, p. 183.

Miss Stafford's method of developing pitch is less detailed and effective than those of the other teachers. Her pitch exercises are incorporated largely into breathing and resonance exercises and very few of her pitch exercises can be used in isolation from her total method.

Dr. Machlin, Professor Parks and Miss Balos all use very similar and equally effective exercises for "sliding" pitch and pitch "builds".

For advanced students, Professor Parks' "Opera" exercise[39] is an outstanding method of linking pitch use with acting because it involves the "acting" of a simple scene rather than merely reading from material. He is the only one of the four teachers who uses this type of exercise.

None of the four teachers use very many exercises for developing projection.

Of the four approaches, Dr. Machlin's exercises[40] are the most effective, in my opinion, because students work in pairs, at varying distances, to become aware of their ability to "reach" another vocally, rather than relying on the teacher to act as a "monitor" for good projection. The other teachers do not use this method of working in pairs for projection.

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[38] See Appendix Q, exercise 1, p. 183.

[39] See Appendix P, "Opera exercise," p. 181.

[40] See Dr. Machlin's exercises in Chapter 6, p. 89-90.

Dr. Machlin also uses a greater variety of physical spaces than other teachers to help the student to adjust his vocal energies to different working spaces, which is necessary for an actor.

Miss Stafford uses a variety of physical spaces for projection exercises, but students work alone on single speeches for projection, rather than speaking to each other, which is closer to an acting situation and therefore more valuable, in my view.

Professor Parks and Miss Balos do not use specific exercises for projection.

Professor Parks' instruction to students to use greater intensity on low-pitched sounds is a helpful aid in achieving projection.

However, the work of Professor Parks and Miss Balos in this area does not help actors to adjust their vocal energies to different working spaces and their approaches are less complete and effective in that respect than those of Dr. Machlin and Miss Stafford.

From an overall point of view, Dr. Machlin's teaching approach is especially methodical and thorough. In every area of Voice-training she develops a gradual progression from initial "listening" exercises to work of increasing difficulty and complexity. Because of the clarity with which she demonstrates these progressions, other teachers can readily adopt and follow her method.

Dr. Machlin's consistent use of tape-recordings is a helpful method of judging progress, by listening to earlier and later recordings of the students' voices. To make these vocal tests more reliable, Dr. Machlin is careful to record voices under exactly similar conditions each time. On the evidence of sample tape-recordings which I heard, many students appeared to make remarkable progress, particularly in the development of resonance and pitch range.

Because of the lack of tape-recordings in other teaching methods, I was unable to judge whether students had made similar progress in these programs. However, advanced students appeared to have reached a similar level in Voice-development in the other schools.

In practice, the analytical nature of Dr. Machlin's approach sometimes leads to a fragmented and isolated treatment of Voice areas, rather than the more integrated approach of methods which emphasize "muscle sense" and "emotion".

In my opinion, teachers such as Miss Balos and Miss Stafford make a much clearer link with acting through the use of "emotion", which is valuable, particularly for advanced students.

To counteract the tendency for students to "listen to themselves", Miss Balos conducts her classes with great speed and energy, which lessens the likelihood that students will "analyse" or "over-listen" to what they are doing.

A great deal of her teaching approach can be incorporated into other teaching methods, as I have indicated above, and her exercises are especially useful for advanced students.

Because her training program is shorter than that of the other teachers, Miss Stafford allows the different Voice areas to overlap more than the other teachers. For this reason, it is more difficult to use many of her exercises in isolation from her total teaching approach.

Her strong emphasis on projection at an early stage is also undesirable, in my opinion, in longer teaching programs where students can achieve projection in a more gradual and relaxed manner.

A number of her exercises nevertheless provide especially imaginative bridges with acting, as I have indicated, and these exercises can be incorporated into other teaching methods advantageously.

Although much of Professor Parks' approach cannot be used in other teaching approaches without special training in the Alexander Technique, his method is sufficiently flexible to include many useful exercises, particularly for relaxation, resonance and pitch, which can easily be adopted by other teachers.

His approach is especially advantageous for students who are slow in responding to standard exercises.

His method is also helpful in preparing actors to use their voices in a relaxed manner while performing strenuous movement on stage, as he includes more vigorous exercises than other teachers.

The approaches of the four teachers in this study indicate an increasing trend towards the use of "muscle sense" rather than "listening" in most Voice areas.

Three of the four teachers concentrate heavily on "muscle sense" for relaxation, breath control and resonance. Even Dr. Machlin, who favours "listening" more than the other teachers, uses "muscle sense" extensively for relaxation and breath control. This trend does not, however, diminish the need for "listening" at specific points in Voice-training, notably for pitch development.

Most teachers also appear to favour a closer correlation between Voice-training and acting, through the use of "thought", "emotion" and "intentions" in exercises.

In my opinion, it is important and valuable to make this connection wherever possible, in order to integrate Voice-training successfully with the broader acting program.

Conclusion

In conclusion, then, all four teachers in this study approach Voice-training with the same goals, namely to achieve:

1. A relaxed voice produced by an instrument free of tension.
2. A voice well-supported by breath control.
3. A resonant voice with carrying-power.
4. A voice with a high range of variety in pitch and tonal quality.
5. A voice which is adaptable to different acting spaces.

All four teachers pursue these objectives and the differences in their approaches ultimately refer to personality rather than method. The different emphases lead to strengths and weaknesses in different areas of Voice-training.

Dr. Machlin's personal emphasis results in an extremely methodical and thorough approach which enables her to evaluate students at all stages of Voice-training through "listening". However, her method does not provide such a clear link with acting as those of Miss Stafford and Miss Balos, through the use of "emotion".

Robert Parks' approach is particularly advantageous for students who are slow in responding to standard Voice exercises because he is able to help the student directly through manipulation and massage. His emphasis on vigorous exercises also helps the student to adjust his vocal use to strenuous movement on stage. His approach, however, tends to make students depend heavily on direct physical guidance from the teacher.

Miss Balos' approach tends to make students more self-reliant, as she does not apply direct manipulation to the students at any stage of the training. This is advantageous to the student because he is able to continue his development on his own after he has completed his training. Miss Balos' use of "emotion" also helps to link Voice-training with acting.

Miss Stafford's strong use of "emotion" in all areas of Voice-training is advantageous because Voice exercises are linked constantly with acting, but her overall approach is more suitable for condensed training programs, where good projection has to be achieved rapidly. This leads to an overlapping of the Voice areas during the training and her exercises consequently cannot be used as easily in isolation from her total approach as those of the other teachers.

It is unrealistic to attempt to arrive at a qualitative judgment: all four methods are effective in their own way according to the teachers who employ them. The similarities in their methods are overwhelmingly more manifest than the differences, which seems to imply that the basic Voice-training technique is well-established in the practice of the four teachers whom I have investigated.

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TABLE 1

Comparative Organization of Teaching Methods and Teaching Aids

The comparative chart below shows the detailed organization of the teaching programs used by the four teachers in this study. Also included are the types of teaching aids used by the teachers. The information for this chart was derived from interviews with the teachers concerned.

	Evangeline Machlin	Robert Parks	Kristin Linklater	Kathleen Stafford
Length of training at school	4 years	4 years	4 years	2 years
Average number of students in class	12-15 students	12-15 students	12 students	25-30 students
Voice and Speech taught as separate subjects	No	Yes	Yes	No
Voice areas taught in 1st year	Relaxation, breath control resonance, beginning of pitch control	Relaxation, breath control, resonance Alexander Technique	All areas	All areas
Voice areas taught in 2nd year	Pitch range and flexibility, Tonal variety	Pitch range and flexibility, Alexander Technique	All areas	All areas
Voice areas taught in 3rd year	All areas (tutorial)	All areas (tutorial)	All areas (tutorial)	No third year
Voice areas taught in 4th year	All areas (tutorial)	All areas (tutorial)	All areas (tutorial)	No fourth year
Students assessed by grades	Yes	No	No	No
Students assessed by pass/fail	No	Yes	Yes	Yes
Special remedial classes for students with severe voice faults	Yes	No	No	No
Daily warmup classes for all students	No	Yes	Only last 3 weeks of term (students in productions)	Yes
TEACHING AIDS USED				
Tape recorders	Yes	Yes	No	No
Physiology charts	Yes	No	No	No
Piano for pitch or resonance	Yes	Yes	Yes	Yes
Visual aids for pitch	Yes	Yes	No	No
Corks for mouth-stretching	Yes	Yes	No	No

APPENDICES

APPENDIX A

THE "ALEXANDER TECHNIQUE"[1]

The Alexander Technique is not, strictly speaking, a method of Voice-training but rather a system of physical re-education and body alignment which has some application to Voice-training particularly in the areas of relaxation, body alignment and breath control.

Frederick Matthias Alexander, formulator of the technique, was born in Australia in 1869. During the early part of his career, he gave recitals from Shakespeare and worked as an actor. He started to develop his system of physical re-education because of voice problems which he experienced while giving performances.

Alexander found that his voice would fail frequently half-way through a recital. This tendency persisted in spite of medical treatment. He began a long period of self-observation, using mirrors, to see if he could isolate the cause of his loss of voice.

He found that whenever he started to speak, or perform almost any action, he had an involuntary tendency to pull his head backwards and downwards and that this unconscious reflex action was leading to throat tension and hoarseness.

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[1] The information in this appendix is taken from two books: Edward Maisel, ed., The Resurrection of the Body: The Writings of F. Matthias Alexander (New York: Dell Publishing Co., Inc., 1969), and F. Matthias Alexander, Man's Supreme Inheritance (2d. ed.; London: Methuen and Co. Ltd., 1918).

To prevent this, he decided, it was necessary to control consciously all his actions to "inhibit" these unnecessary and habitual reflexes and it is on this principle that most of his work is based. Although he used this conscious control initially to achieve a satisfactory head-neck-torso relationship, he later extended the application of his system to the alignment of the whole body.

Alexander used the word "inhibit" in this special sense of applying the conscious will to prevent the body from performing actions automatically, replacing these actions, instead, with more positive and economical habits.

Alexander felt that students could not "unlearn" bad habits easily because their accustomed behaviour patterns felt "right", while the new and more desirable habits felt alien and "wrong". This set up an understandable resistance to acquiring better habits.

To counteract this, he told students of his technique to begin by simply refusing to do anything at all when called upon to perform any given activity.

This does not mean that the student is asked to remain in a state of passive collapse, but that he consciously refuses to obey his usual set of involuntary reflex actions to prepare for that act.

The student then allows the teacher to guide him through actions like sitting, standing and walking with the teacher encouraging the best head-neck-torso relationship throughout the process.

To the extent that the student does not allow any of his old habits to intrude, he allows the teachers manual guidance to give him, repeatedly, a new sensory experience of these common acts.

Finally the new, and better, alignment of the body during these movements begins to feel "right" and his older habits feel "wrong". Subtle habits of "readiness" for any action are gradually revealed and prevented.

Relaxation, in Alexander's view, was not merely a matter of getting rid of tensions but of reorganizing tensions into a source of energy and satisfaction. This attitude clearly underlies the approach of several teachers in this study, whether or not they attribute it to Alexander.

He also had decided views on breathing. He was opposed to the traditional form of "deep breathing" exercises on the grounds that they encouraged faulty posture by pulling back the shoulders and thrusting the chest forward and because he felt that the unmotivated "sniffing" in of air was of no practical value. He was more interested in developing an awareness of breathing as it supports movement and of movement as it reinforces breathing.

This meant, in practice, that he encouraged the elasticity of the ribs, so that adjustments in breathing could be made in response to the ever-changing demands of movement, without forcing or "sniffing".

Alexander's written work is almost entirely theoretical and he does not give detailed descriptions of exercises in any specific area. The practical application of his methods can only be learned by training at one of the schools which teaches his technique. One of these is the American Center for the Alexander Technique in New York and there are others in France, Italy, Denmark, Israel and South Africa.

Alexander died in 1955. His influence in the field of Voice-training is only now beginning to be recognized and the use of his technique, in some form, seems to be used increasingly in North American drama schools.

APPENDIX B

RELAXATION EXERCISES USED BY DR. MACHLIN

The following list is a detailed description of the relaxation exercises used by Evangeline Machlin.

For the sake of clarity, I have written the exercises in the form of direct orders. Although these are not Dr. Machlin's exact words, they are very close to them.[1]

Listening to Relaxed Speech

1. Listen to the record of John Brown's Body (Columbia OSL181). Compare the voices of Tyrone Power, Raymond Massey and Judith Anderson for relaxation combined with projection.
2. Listen in the live theatre to any actor or actress whose speech you admire. Note with how much relaxation the speech is produced.

Body Relaxation Exercises

Exercises:

Lying down:

Lie on the floor on your back, arms at your sides.

1. Arms: Stretch the right arm up in the air, rigid,

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[1] The information in this appendix is taken from interviews with Dr. Machlin and observation of her classes, and from her book, "Speech for the Stage".

with the fist clenched. Hold this position momentarily then drop the arm heavily to the floor. Let it lie loosely and limply. Repeat the exercise with the other arm. Rest for 30 seconds or more.

2. Legs: Stretch both legs straight out and bend the toes down sharply, arching the feet. Hold very briefly. Let go. Rest.
3. Buttocks: Contract the buttocks as tightly as possible. Release them. Rest.
4. Spine: Flatten the spine to the floor. Relax it. Rest.
5. Shoulders: Lift the shoulders forward, off the floor. Drop them back again. Rest.
6. Neck: Move the head from side to side without lifting it from the floor. Feel the neck muscles stretch. Rest. Move the chin down to the chest, lifting the head from the floor. Release it. Rest.
7. Face:
   (a) Close the eyes tightly. Open them and relax.
   (b) Open the eyes as wide as possible, wrinkling the brow. Relax them to a half-open position.
   (c) Frown and then release the frown.
   (d) With closed lips, smile as widely as possible. Release it.
   (e) Open the mouth as widely as possible. Inhale deeply. Sigh and slowly yawn out the air.

(f) Repeat, yawning more deeply and gently saying "Aaaaah" on the yawn.

8. Rest period: Rest for several minutes after the above exercises to allow your muscles to become fully relaxed. Observe the rise and fall of your abdomen as the air enters and leaves your lungs.

9. Getting up from relaxation: Rise very gradually from the lying position, in the following order:

(a) First draw up the right shoulder and hip and roll on to the left side. Move your knees towards your chin and curl your head down to meet them, keeping your head on the floor.

(b) Place the right hand, palm downwards on the floor and push with the right hand and left elbow until you are on your knees. Draw one knee up under you until the foot is on the floor. Do the same with the other knee and slowly raise the hips until the legs are straight, with the feet apart. Allow the trunk, head and arms to hang loosely from the waist.

(c) Slowly draw the trunk upward, pulling with the muscles of the lower back, straightening the spine joint by joint, feeling each vertebra coming to rest on the one below it. Come into the erect position with the head and arms still hanging loosely.

(d) Raise the head slowly like a weight which you set on top of the spinal column. The arms fall into their natural position at the sides of the body. The whole body should now feel straight and tall well-supported, relaxed and free.

10. Energization: Energize the body by springing lightly on the feet, swinging the arms and moving the head easily. Feel the balance of this posture: the body is erect and the head is comfortably poised on top.

Sitting-down Relaxation Exercises

Sit down with your back against the back of a straight chair with your hands in your lap.

1. Arms: Stretch them out in front one by one. Relax, as in the first group, dropping your hands in your lap. Rest.
2. Legs: Stretch them out stiffly, toes pointed down, feet clenched. Relax, letting the feet rest on the floor.
3. Buttocks: Clench them so that the body is lifted a little from the seat of the chair. Relax them. Rest.
4. Shoulders: Drop your arms to your sides. Round the shoulders, turning the hands inward. Relax, returning your hands to your lap. Rest.
5. Neck: Hang the head. In this position, turn it to left and right. Rest.

6. Face: With the head still hanging, do the facial exercises described in No. 7 of the lying down series. Finish with deep inhalations and yawns, allowing the head to swing upwards as the air is exhaled.
7. Energization: Energize the body into an upright, supported sitting position.

Standing Relaxation Exercises

Stand erect with the feet apart. Wear low-heeled shoes, or none.

1. Arms: Stretch out each arm to the front, in turn, with fists clenched. Drop the arm heavily to the side. Rest.
2. Feet: Clench the feet, arching them as much as possible. Release them. Rest.
3. Knees: Lock the knees back sharply. Release them. Rest.
4. Buttocks: Clench the buttocks. Release them. Rest.
5. Shoulders: Round the shoulders, keeping the arms loose. Release them. Rest.
6. Neck: Hang the head. Turn it to left and right, as above. Rest.
7. Face: With the head hanging, do the facial exercises described in No. 7 of the lying down series. Yawn and sigh, as in No. 6 of the sitting series. Rest.
8. Energization: Energize the body as in No. 10 of the

lying down series.

Transition Exercises

These exercises are used to prepare for the active work of speech and to induce deep relaxation in the shoulders and neck where residual tensions may linger.

Stand with the feet apart for greater stability.

1. Bobbing: Let the trunk and arms fall heavily from the waist, stretching loosely down with the fingers. Touch the floor if you can. Bob down and halfway up several times. Uncurl slowly into the erect position. Repeat, increasing your speed, bobbing easily up and down.
2. Swaying: Stand with the trunk, head and arms hanging from the waist. Sway the trunk and arms freely and rhythmically from side to side. Raise the trunk to the erect position.
3. Circling: Stand with the trunk and arms hanging. Begin by swaying from side to side as before. Build the swaying up to a vigorous swing that carries trunk and arms well out to each side. Complete with a strong swing, carrying the trunk and arms up, over and around in a full circle. On the rebound, continue two or three more strong swings, the last of which pushes the trunk and arms up and over into a sweeping circle in the opposite direction.
4. Arm swinging: Stand erect, arms loosely at the sides.

Count 1, 2, 3, in waltz time, swinging the arms as follows, with the count. Lift the arms, swinging them forward and up to shoulder level, shoulder width apart. Bounce the arms, swinging them down, then out and up on the rebound, sideways to shoulder level. Circle the arms, swinging them down again, forward and up over the head, bringing them down to the sides ready for the count of 1 again. The exercise is continuous.

5. Head rolling: Hold the body tall and easily erect. Hang the head heavily, chin on the chest. Slowly circle the head around, letting it fall on the shoulders, with chin pointing upward. This should be done lazily with mouth and eyes half-open. Reverse the direction. Keep the motion slow, smooth and continuous. After initiating the motion, begin to inhale on the first half of each circle and exhale on the second half. Yawning can also be added.

6. Prolonged yawning: Drop the head forward. Slowly swing it straight up and back, opening the mouth wide and drawing in breath through the mouth and nose. Droop it slowly forward again, breathing out all the air through the mouth. This usually induces a natural yawn. Enjoy it, letting the yawn stretch the back of the throat and the glottis fully.

APPENDIX C

RELAXATION EXERCISES USED BY ROBERT PARKS

The following exercises are used by Robert Parks for relaxation and body alignment. The instructions are close to the words he uses.[1]

Relaxation

(1) Lie down on your back.
  (a) Tense the shoulders. Release them.
  (b) Clench the hands. Release them.
  (c) Lift the head off the floor. Release it.
  (d) Fill the chest with air. Release it on the "ah" sound.
  (e) Raise the legs off the floor. Tense the calves and feet. Release the tension and replace the legs on the floor.
  (f) Raise the arms above you. Tense them. Release them and replace them on the floor.
  (g) Arch the back off the floor. Release it.
  (h) Raise the head and shoulders off the floor. Release and replace them on the floor.

(2) Stand up slowly, retaining as much of the relaxed

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[1] The information in this appendix is derived from interviews with Robert Parks and from observation of his classes.

quality achieved on the floor as possible.

(3) Drop from the waist and undulate the spine. Return slowly to a standing position letting the shoulders fall into a relaxed pose.

(4) Roll the head in large circles to loosen the neck muscles.

Energization

(1) Before rising from lying position, give yourself positive suggestions about how alive and good you will feel when you stand up.

(2) Rise slowly, bounce lightly on the feet, move the arms in a swinging motion around the body.

(3) Run in place, while humming and moving the head easily.

Body Alignment

(1) With arms spread, draw the legs over the head and rest the feet on the floor above your shoulders.

(2) Lying on your back, raise the legs straight up, supporting them with your hands on your hips.

(3) Place the hands above the shoulders and lift the whole body off the floor in an arch, balancing on the hands and feet.

(4) Lie on the stomach. Reach back and grasp the ankles, curving the spine back. Hold the position and then relax.

(5) Lying on the stomach: Place the hands in front of the shoulders and straighten the arms, curving the spine and the head back slowly. Return to a prone position.

(6) Lying on the stomach: Stretch the right leg across the left leg as far as possible, taking a breath as you do the stretch. Relax. Do the same with the other leg.

(7) Lying on the back, stretch across the body with the left arm towards the right arm. Relax. Do the same with the other arm.

(8) Lying on the back. Feel as much of the spine on the floor as possible. Waggle the legs and shoulders up and down while in this position.

(9) Sitting position, with legs extended on the floor: Reach for the toes with the hands.

(10) Kneeling position: Place the crown of the head on the floor and push downwards, stretching the muscles at the back of the neck.

(11) Kneeling position: With hands on the floor and arms stretched, let the head hang loosely. Move the head from side to side like the pendulum of a clock. Raise the head and move it around in a circular motion, both clockwise and anti-clockwise.

(12) Standing: Bring the palms of the hands together as if for prayer. Stretch the arms back level with the

shoulders. Bring the palms together again. Stretching the right leg backwards and bending the left knee, lower the body to the floor, placing the hands in front of you. (This is similar to the position for starting a race). Swoop the head and spine upwards from the floor and return to the standing position, palms together. Repeat, using alternate knees for bending.

APPENDIX D

RELAXATION EXERCISES USED BY ROWENA BALOS

The following exercises are used by Miss Balos for body alignment and relaxation. The exercises are given in the form of orders and are close to the words she uses.[1]

Relaxation

(1) Lie down on the floor. Relax each part of the body from head to foot. Think of "clouds" or "velvet".

(2) Lying on the floor:

  (a) Tense the facial muscles. Relax them.

  (b) Tense the neck muscles. Relax them.

  (c) Tense the shoulders. Relax them.

  (d) Press down with the spine towards the floor. Relax.

  (e) Tense the arms, clench the fists. Relax.

  (f) Tense the buttocks. Relax.

  (g) Tense the legs. Relax.

  (h) Tense the toes. Relax.

(3) Let someone else cup your neck in their hands and roll your head around to relieve neck tension.

(4) Rise slowly, letting the shoulders drop into a good

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[1] The information in this appendix is taken from interviews with Miss Balos and from observation of her classes.

relaxed position.

(5) Standing up: Drop from the waist. Hang there and bounce lightly. Bring the body slowly into a upright position.

(6) Move the face muscles, isolating different muscles individually. Move the lips. Move the cheeks. Move the forehead.

(7) Widen the mouth "as if making a scream". Widen the mouth "as if making a laugh".

(8) Massage the joint of the jaw with your fingers.

(9) Clasp the hands and shake your arms, moving the jaw loosely with the impetus of the shake.

(10) "Shimmy" (vibrate the muscles) between your shoulders.

(11) Loosen the neck muscles by massaging them with your fingers.

(12) Speak or count while you are performing strenuous exercises to check that you are not tensing the throat area.

(13) Roll your head in large circles to relieve neck tension.

(14) Recite a monologue while hanging down from the waist. Feel the different and more relaxed voice quality when customary neck tension is released.

(15) Find your "centre".

Energization

(1) Shake out the shoulders.

Shake out the arms.

Shake out the legs.

Body Alignment Exercises

(These exercises are used by the movement teacher, Mr. Kelley Holt, both in movement classes and in general Voice classes with Miss Balos).

1. Sitting crossed-legged on floor: Bend the head towards the knees in counts of eight.

   Swing the arms in a circular movement in front of the body and to the sides.

   Bend the arms over the head alternately and push down to the side, in counts of four.

   Hands on the knees, stretch the spine and neck backwards on a count of six. This is a slow arching of the back until the head is reached.

2. Lying on the back:

   Bring each knee up and draw it back with a small bounce off the floor.

   Bend both legs, with toes together and bring them towards the waist in a count of eight.

   With toes together, sway alternate leg out sideways on a one-two count.

   Take both legs right over the head until the toes touch the floor. Raise one leg to a vertical position, then bring the other to join it. Lower the legs.

Reach down with the hands and grasp alternate knees, pulling the leg towards the waist on quick counts of eight (one pull per count).

3. Kneel on the floor, then let the whole trunk fall forward until the head is resting on the floor. The arms are rested back, beside the legs, the buttocks rest on the heels. Relax.

4. Sitting on the heels, rise to a full kneeling position and bring one leg out to the flexed upright position at the side. Return it to kneeling position. Do the same with other leg.

5. Standing:

   Take four paces forward, bend and place the hands on the floor and bend up one leg behind. Rise on a count of four. Continue, bending alternate legs up behind as you bend down.

   Bend the knees, sweep the floor with the hands, open the arms as you return to standing position.

6. Run backwards on the toes, arms hanging loosely, with a tight control on the midriff.

APPENDIX E

RELAXATION EXERCISES USED BY KATHLEEN STAFFORD

The following list is a detailed description of the relaxation and body alignment exercises used by Miss Kathleen Stafford.

The exercises are given in the form of direct orders and are close to the words used by Miss Stafford.[1]

Body Alignment

(1) Bend at the waist. Reach forward with both arms and stretch as far as possible to straighten the spine. Return to an upright position.

(2) Stand against a wall and flatten as much of the spine as possible against the wall. Return to a normal standing position and compare the spinal position with your normal posture.

(3) Imagine a heavy weight around your neck which is pulling you towards the floor. Allow your head and shoulders to fall slowly and allow your spine to follow slowly until you are hanging loosely from the waist. Return slowly to an upright position, allowing your shoulders to fall comfortably in place as

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[1] The information in this appendix is taken from interviews with Miss Stafford and observation of her classes.

you raise your head.

Relaxation

(1) Relax in any way that is comfortable for you on the floor-on your back, side or stomach. Clear your mind of any thoughts of previous or future activities during the day.

(2) Lie on your back.
- (a) Tense your face muscles. Relax.
- (b) Tense your neck muscles. Relax.
- (c) Lift your shoulders off the floor. Relax.
- (d) Press your spine up from the floor. Relax.
- (e) Tense your arms. Relax.
- (f) Press down on the floor with the palms of your hands. Relax.
- (g) Tense your buttocks. Relax.
- (h) Tense your legs. Relax.
- (i) Tense your toes, curving them away from you. Relax.

Rising from Relaxation

(1) Do not push or strain when rising. Get up very gradually, using as little support from the arms as possible.

(2) Stand with a good posture and roll the shoulders forward and then backwards.

(3) Roll the head in large circles to loosen the neck

muscles.

Energization

(1) Tip-toe forwards, backwards and sideways making the pace light and energetic.

(2) Walk aimlessly. Imagine it is a gorgeous day. Show it in your face. Look around with real pleasure at your surroundings.

(3) Start walking and gradually increase the pace to an easy run. Slow down again.

(4) Walk "with a purpose". Imagine that you are at an airport and are trying to find out the time of your flight.

(5) Imagine you have heard a stone crash through a window. Hurry towards the sound to discover what has happened.

Cat and Mouse Exercise

Lying in a relaxed position on the floor, choose another student and imagine that you are a cat, or any other type of animal, and he is your "prey". Hold eye focus and concentration with each other while maintaining a relaxed body position. Wait until your body, although relaxed, is also ready for action and then spring at your prey, who will attempt to avoid you.

APPENDIX F

BREATH CONTROL EXERCISES USED BY DR. MACHLIN

A detailed description of Dr. Machlin's exercises for breath control is contained below. The instructions are as close as possible to her own words.[1]

Exercises

Listening for breath control

1. Use the record 'Homage to Shakespeare' (Argo, mono, NF 4; stereo, ANF4). Listen to the voices of Laurence Olivier, Michael Redgrave and Paul Scofield. Using a Shakespeare text, mark the places where you can hear the actors taking a breath. Judge if the breath was also taken silently between the places marked. Try to read the speeches at the same speed, breathing only at the places marked.
2. On the same record, listen to the voices of Irene Worth and Edith Evans. Mark the text at the points where you can hear audible intake of breath. Notice that one actress inhales more audibly and frequently than the other. Observe that this is related to the emotional content of the material.

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[1] The information in this appendix was derived from interviews with Dr. Machlin, from observation of her classes and from her book, "Speech for the Stage".

3. Listen to the recorded voices of five actors or actresses of your choice and rate them according to the degree of breath control they possess.

Breath Exercises with Normal Inhalation and Gradual Exhalation

Exercises 1 to 4 may be done standing, sitting or lying down.

1. Breathe naturally. Observe the waistline rise and sink.
2. Deepen the breathing, inhaling through mouth and nose. Hold the breath a moment. Release it gradually, observing the action at the front and sides of the waist.
3. Breathe in. Hold the breath, setting the waist muscles. Round the lips, release the waist muscles slowly and blow out the air in a silent whistle.
4. Repeat exercise 3, making the breath last as long as possible without strain.
5. Stand up and walk about during the following. The exercise is continuous.
    (a) Walk four long steps, inhaling all the time.
    (b) Walk four more steps, holding the breath.
    (c) Walk four more steps, exhaling all the time.
6. Stand erect, one arm folded across your waist in front, the other across your back. Inhale, feeling the body expand so that it pushes on both your arms.

Slowly exhale.

During all the above exercises, observe the natural recoil of the thorax after inhalation, which is sufficient to send a stream of air upwards for several seconds. No conscious effort is needed to sustain it.

Breath Exercises with Panting Exhalation

1. Sit in a straight chair, upright but relaxed. Pant rapidly with an open mouth but without inhaling. Do this in a rhythm of seven pants followed by an inhalation. Observe the downward thrust of the diaphragm on the inhalation.
2. Make three slow pants, followed by a pause and inhalation.
3. Make strong single panting sounds, inhaling between each one like a dog. Observe how the lungs fill with air at each inhalation, expanding the trunk at and above the waist.
4. Send out the breath in long, slow panting huh's. Inhale with a conscious downthrust of the diaphragm. Take in air through both nose and mouth.
5. Blow the air out gently through rounded lips until the lungs feel empty. Fill them by pulling down the diaphragm.

Breath Exercises with Strong Inhalation followed by Exhalation with Humming and Speaking

1. Humming:

   (a) Hum the air out with lips closed, maintaining a steady "Mmmm" sound. Use a middle pitch. As the lungs empty, inhale strongly through nose and mouth using a more vigorous downstroke of the diaphragm than in the above exercises.

   (b) Hum loudly and steadily, moving upward on the eight notes of the scale, starting on a low easy pitch. Sustain each pitch on one breath until air pressure from the lungs is reduced so that they need to be refilled. Draw in breath with a vigorous downstroke of the diaphragm and resume humming.

   (c) Hum up the scale as before, but substitute a series of staccato "M" sounds on each pitch: m-m-m-m-m-m-m-m-m: Pause and inhale.

2. Counting exercises:

   (a) Count aloud slowly, sustaining the vowel sounds, up to 10. Pause between each count to inhale. Pull down the diaphragm strongly for inhalations.

   (b) Count in the following sequence, pausing after each group to inhale strongly:

   One! (Refill)
   One, Two! (Refill)
   One, Two, Three! (Refill)

Continue to 10, inhaling only at the end of each group.

Breath Exercises with Strong Inhalation followed by released Exhalation in Reading

1. Read single sentences of about 10 words, using full voice and inhaling before each line.
2. Read a selection like Walt Whitman's "Leaves of Grass", inhaling after approximately every second line, as the sense allows.
3. Read "Do Not Go Gentle Into That Good Night" by Dylan Thomas, inhaling strongly once or twice during each verse wherever the sense of the line permits a momentary pause. Do not attempt to continue on the same breath once you have felt failing air pressure in the lungs.
4. Read poems such as "Meeting at Night" by Robert Browning and "They all Want to Play Hamlet" by Carl Sandburg, using progressively longer breath units.

Breath Exercises with Released Exhalation followed by Contracted Exhalation

1. Read the speech from Hamlet (III,iv,) beginning "Look here upon this picture, and on this . . . and reason panders will". Divide it into long breath units, with lines 4 to 10 as one unit. Try to use both released exhalation on the shorter units and contracted exhalation to sustain the longer units.

2. Divide the following Shakspearean speeches into appropriate breath units, some short, some long. Read them aloud in full voice, using released and controlled exhalation as required.
   - (a) Henry V, IV, iii. King Henry: "What's he that wishes so? . . . Saint Crispin's day".
   - (b) Othello, V, ii. Othello: "Behold, I have a weapon, . . . dead, O!"
   - (c) Anthony and Cleopatra, IV, xii. Antony: "This foul Egyptian . . . Eros, ho!"
   - (d) King Lear, II, ii. Kent: "A knave, a rascal, . . . come your ways".
   - (e) King John, III, iv. Constance: "No, I defy all counsel, . . . my sorrow's cure".

Exercises for Developing the Stage Scream

Listening

1. Compare the climactic scream of "Ah, vengeance!" (Hamlet, II, ii,) as recorded by the following artists:

John Barrymore (Audio Rarities, 2280).
Laurence Olivier (RCA Victor, LM 1924).
John Gielgud (RCA Victor, LM 6007).
Paul Scofield (Phonodisc, SRS232).
Richard Burton (Columbia, DOL302).

Rank them in order of theatrical effectiveness, according to your opinion.

These exercises should be started gently, adding more force gradually as you discover how to keep the throat relaxed while producing the sound. The ultimate object is to rely entirely on breath pressure to make the scream, without any tensing of the throat or larynx.

2. The Single Scream

   (a) Inhale deeply, contract the abdomen and whisper "Ho".

   (b) Inhale again, contract the abdomen and say "Ho!" Feel the energy behind the tone coming from the forced-up air.

   (c) Inhale deeply and quickly. Then contract the abdomen sharply. At the same instant, say a loud staccato "Ho!"

   (d) Repeat, using two successive contractions, crying "ho, ho!"

   (e) Repeat, crying "Hoooooooo!" Continue to pull in the abdomen and blow out the sound until the breath is gone.

   (f) Repeat, pushing out "Ho!, Hi!, Hey!". each on one breath.

   (g) Repeat (f) as loudly as you can. Relax and yawn if you feel any strain in the throat.

3. Screaming within a speech

   Mark up suitable Shakespearean speeches with diagonals before words which are suitable for screaming.

Inhale at the diagonals before screaming the relevant words. If necessary, snatch a breath in the middle with which to complete screaming out the rest of the sentence.

4. The Climactic Scream

Find examples of screams that occur at climaxes of dramatic action in plays. Practice the technique within the context of the scene in which the scream occurs.

Exercises for Laughing and Sobbing on Stage

Listening

1. Listen to recordings of laughing and weeping, such as the following:

Uproarious laughter: Mathilde Casadeus as Nicole in "Le Bourgeois Gentilhomme", La Comedie Francaise, (Period 1512) Side A, Band 3.

Smothered Weeping: Peggy Ashcroft as Beatrice in "Much Ado About Nothing", (London, 4362), IV, i.

John Gielgud as Lear in "Ages of Man" (Columbia, OL5390), V, iii.

Richard Burton as Hamlet in "Hamlet" (Columbia, DOL302), II, ii.

The panting exercises used here can be used to develop laughter or sobbing:

2. Sitting down. Pant rhythmically and slowly, inhaling each pant.

3. Pant in groups of three, inhaling between each: Huh-huh-huh: Pause and inhale.
4. Pant seven times quickly and inhale: Huh-huh-huh-huh-huh-huh-huh: Pause and inhale.
5. Pant in irregular rhythm, vocalizing the pants, letting the pitch rise and fall. Hah-hah-hah-------hah-hah-hah-hah-----haaaaaaa-----hah-hah.
6. Pant in vocalized bursts like laughter. Accent some of the pants by prolonging them. Vary the length of these accents. Vary, too, the number of the pants which follow each accent. Smile and laugh as soon as you feel the impulse to do so.
7. Start the laughter with an appropriate comment:
   I never heard anything so funny in my life!
   Huh-huh-huh, huh-huh-huh!
   He looked ridiculous! Huh-huh-huh! etc.
8. Read a scene with other actors which builds to a climax of laughter. (e.g. the final scene in "The Circle" by Somerset Maugham).
   Collect samples of laughter and sobbing called for in the text of plays and practice the technique within the context of the scene.

APPENDIX G

BREATH CONTROL EXERCISES USED BY ROBERT PARKS

The following list of exercises is used by Robert Parks for breath control. The exercises are given in the form of direct commands and are close to the words he uses.[1]

(1) Lie down on the floor. Breathe in and out, using minimal effort. Place your fingers at the point where the ribs meet to locate the diaphragm. Feel how this can be controlled consciously to expel air.

(2) Assume different bodily positions, such as kneeling, lying with your legs drawn up, lying on your stomach and standing with your torso hanging down from the waist. Feel the different quality of breathing that is possible in these different positions.

(3) Stand up and face a fellow student. Place your hands on each others ribs and feel the expansion of the ribs as they rise and fall. Make your ribs move easily and elastically.

(4) Face a fellow student and place your hands on each other's diaphragms. Feel the rise and fall in this area as breath is taken in and expelled.

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[1] The information in this appendix was derived from interviews with Robert Parks and from observation of his classes.

(5) Face a fellow student and place your hands on each other's ribs. Match your breath cycle with the other student by breathing in as he breathes out. Set up a rhythmic cycle of inhalation and exhalation.

(6) Start walking and time your intake and expulsion of breath over a set number of paces. Gradually increase the number of paces over which you time the expulsion of air from the lungs.

(7) Stand up: Breathe in and count aloud from 1 to 10 as you expel your breath. Gradually increase the numbers which you are counting, until you are reaching up to 20, or more, on one breath.

(8) Stand comfortably and begin panting silently. Feel the movement of the diaphragm as it moves vigorously to support this activity.

(9) Pant, making vocalized sounds such as "Huh", "Hi", and "Hey", activating the diaphragm vigorously to support these sounds.

(10) Lie on your back and raise your legs in the air by supporting your buttocks with your arms. Move your legs in a "bicycling" motion while breathing easily and expelling the air on a humming sound.

(11) Run in place, maintaining a rhythmic intake and expulsion of breath.

(12) Kneel on the floor and bend the torso and arms forward until they are resting on the floor.

Breathe in, stretching the back ribs, and release the air vigorously on the sounds "Shhh", "Wooo", or "Ohhhhh".

(13) Lie on your back and raise your legs and arms off the floor, simultaneously taking in a swift breath. Hold the position for a moment and then release the air as you lie down again.

(14) Lie on your back. Reach down with both hands and grasp your right knee, pulling it towards you and inhaling rapidly. Hold the position for a moment. Release your leg and exhale as you return to a prone position. Repeat the action, using the left leg.

(15) Lie on your stomach, with your arms stretched in front of you. Stretch your left leg over your right leg, towards the floor, and take in a breath. Release your breath as you replace your leg on the floor. Repeat this action with the opposite leg.

(16) Lie on your back with your arms stretched parallel with your shoulders. Keeping your left arm on the floor, reach over with the right hand and touch your left hand, taking in a quick breath as you move. Release your breath as you replace your right arm on the floor. Repeat this with the opposite arm.

(17) Stand with legs apart. Bend from the waist. Inhale and slowly bring the torso upright while exhaling on open sounds like "Ho", "He" and "Ha".

(18) With a partner, mime the actions of fencing while each of you speaks alternate lines of a piece of learned poetry. Keep a rhythmic supply of breath to support the vocal tone easily while you are performing the actions of fencing.

APPENDIX H

BREATH CONTROL EXERCISES USED BY ROWENA BALOS

The following exercises are used by Miss Rowena Balos for breath control. The exercises are given in the form of direct commands and are close to the words which she uses.[1]

(1) Lie down on the floor. Feel the rhythmic rise and fall of your breath, like a heart-beat. Breathe easily, without using pressure from the outer abdominal muscles to expel your breath.

(2) Place your fingers just below the meeting-point of the ribs. Feel the movement of the diaphragm as you breathe. Keep this movement free and elastic, without any pulling or forcing of your breath intake and expulsion.

(3) Alter your body position from standing to sitting, lying down, kneeling or bending over. Feel the movement of the diaphragm in these different positions.

(4) Standing or sitting: Close off one nostril with your fingers and draw in your breath as deeply as possible through the other nostril. If necessary hold out the open nostril with your other hand to

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[1] The information in this appendix was derived from interviews with Miss Balos and from observation of her classes.

allow the air to pass in freely. Feel the pull of the intercostal muscles as both the back and front ribs widen. Breathe out. Block off the opposite nostril with your fingers and repeat.

(5) Stand up. Bend your arms and place them level with your shoulders, the hands touching at chest level. Pull your arms backwards with a quick jerking movement, while emitting rapid puffing breaths in time with your arms movements. Relax your arms and then repeat.

(6) Stand with your feet apart. Bend your body from the waist and bounce your spine. Breathe easily, moving your ribs freely as you raise your body upright again.

(7) Standing: Lift your arms up slowly from your sides to above your head, breathing in as you raise them. Expel your breath slowly as you lower your arms again.

(8) Standing or sitting: Breathe in and count aloud as you exhale. Count to progressively higher numbers on one breath as your breath control increases.

(9) Converse with a fellow student in a relaxed manner by allowing your voice to flow out as if you were sighing as you talk. Complete each sentence on one "sighing" breath.

APPENDIX I

BREATH CONTROL EXERCISES USED BY KATHLEEN STAFFORD

The following exercises are used by Miss Kathleen Stafford for breath control. They are given in the form of direct commands and are close to the words she uses.[1]

(1) Lie down on the floor. Place your fingers at the point where your ribs meet and feel the action of the diaphragm. Puff your breath out lightly and feel the diaphragm move more vigorously.

(2) From a prone position, sit up, breathing in as you do so. Let your breath impel you to sit up. Lie down again, letting your breath go.

(3) Lie down with your arms stretched over your head. Breathe in as you raise your torso and touch your toes. Breathe out as you lie down again.

(4) Stand up. Place your fingers on your front ribs and your thumbs on your back ribs. Breathe in and feel the expansion of both your back and front ribs. Let the air out on an "S" sound. Drive all the air out with your diaphragm before allowing your ribs to collapse.

(5) Standing: Take a good breath. Within that breath,

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[1] The information in this appendix was derived from interviews with Miss Stafford and from observation of her classes.

take short panting breaths. Keep your ribs as fully expanded as possible. Feel your diaphragm moving to support this activity.

(6) Place one hand on your diaphragm, the other on your ribs. Breathe in silently for about two seconds with a specific attitude in mind, such as sadness, arrogance or pleasure. Expel the air on an "MMMM" sound, sustaining the intention until the sound is completed. Do not let the sound die away. See that your ribs do not "collapse" instantly when you make the sound.

(7) Stand up. Bend from your waist. Breathe in and say the sounds "Meng-mah", "Ming-mah", "Mung-mah". Feel the amount of breath needed to make these sounds. Repeat these sounds in an upright position, checking to see that your ribs are fully expanded while you complete the sounds.

(8) Place your hands on your ribs and your diaphragm. Keep your ribs out and say: "One, two, three, four, five, six, seven". Instead of a string of numbers, think of a definite sentence with an intention behind it, like "I am going home tomorrow". Try the same string of numbers with different moods in mind such as "sad", "happy" or "commanding". Do not ignore the first number or drop your voice on the final number. Breathe in between each change of mood.

(9) Stand up. Roll your shoulders loosely, breathing

all the time. Feel the pull on your chest muscles as you do this.

(10) Read a Shakespeare sonnet aloud. Breathe at the end of every line, irrespective of the sense. Let your breath support your tone through to the end of each line.

(11) Stretch your arms out level with your shoulders, then bend them so that your fingers touch at the back of your neck. Feel your ribs stretch out when your arms are in this position. Recite a poem, such as "Bad King John". First breathe between each line. When you can do this easily, sustain your breath over two, three and four lines at a time. Read the piece quietly, as well as with full tone.

Exercise for Stage Laughter

(1) Begin by smiling with your eyes, to give you the correct impetus for laughter. Take in a small breath. Emit a series of short "Ha" sounds with a panting motion. Allow your abdominal muscles to move freely. Increase the rapidity of the "Ha" sounds until they begin to merge into the sound of natural laughter. Vary the intervals between breath intakes and elongate some "Ha" sounds.

(2) Exercise for Stage Weeping:

Allow your face and ribs to narrow and your lips pout, to induce the correct physical impetus for sobbing. Take in a breath and emit the breath in short "Oh" sounds, supported by quick movements of the diaphragm. Vary the amount of tonal sounds and silent pants, rising to small crescendos of sound, until the sounds resemble realistic sobbing.

APPENDIX J

RESONANCE EXERCISES USED BY DR. MACHLIN

The following exercises are used by Dr. Machlin to develop vocal resonance.[1]

They are given in the form of direct orders and are close to the words she uses.

Listening Exercises

1. Listen to side 2 of the record "Homage to Shakespeare" (Argo, NF4, mono; ZNF4, stereo). Do not identify the readers beforehand, from the jacket or brochure. Decide whether the voices are those of actors or non-actors. Compare your decisions with the information provided with the record. Play the record again, listening for the difference in resonance between the actors and non-actors.
2. Listen to the following records: "Othello" (Columbia, SLi53;) "Ages of Man" (Columbia, OL5390;) "Twelfth Night" (Caedmon, SRS213;) Just-So Stories (Caedmon, TC1038;) "Poetry of Thomas Hardy" (Caedmon, TC1140;) and "Anta Album of Stars" (Decca, DL9002). After listening to the first five records, decide where

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[1] The information in this appendix is derived from interviews with Dr. Machlin and observation of her classes, and from her book, "Speech for the Stage".

the following actors are using maximum and minimum resonance; Paul Robeson, Jose Ferrer, John Gielgud, Paul Scofield, Boris Karloff and Richard Burton. On the last record, listen to Helen Hayes, Florence Eldridge, Eva LeGallienne, Katharine Cornell, Julie Harris, Edith Evans and Tallulah Bankhead. Place them in order, according to the fullness of resonance in their voices. Justify your decision with reference to specific passages.

Humming and Moving Exercises

1. Swing the arms in the routine described in No. 4 of the transition exercise for relaxation. Do this to a count of three. Hum on one low note for the three counts. Repeat, humming the next note up the scale for the next three counts. Continue this for one octave up and one octave down the scale.
2. Do the head-rolling exercise (Transition relaxation exercise No. 5,) singing the syllable "Mah" with each repetition. Move one note up the scale with another sung "Mah" each time the head-rolling is reversed in direction.
3. Sing the sounds: "Mah," "Maw," "Moh," "Moo," "Mow," "My," "May," "Mee," while moving the upper body rhythmically in any of the following ways:
    (i) Circling the upper trunk and reversing direction.
    (ii) Single arm-swinging.

(iii) Head-turning, head lowering and raising, head dropping back and raising.

(iv) Shoulders rounding and releasing.

(v) Hands clasping and releasing.

(vi) Arms bending and extending, sideways, upward, forward and backward.

(vii) Trunk bending sideways and straightening.

(viii) Trunk twisting sideways and straightening.

Extended Singing Exercise, with Breath Control

(1) Using the "Ah" sound, in four-note groups, sing upward for seven groups on one breath, using the tonic sol-fa progression do-re-mi-do, re-mi-fa-re, mi-fa-so-mi, etc. A single "Ah" ends the upward progression. Take a breath and sing the same combination downwards on one breath. Start in any low pitch suitable for your voice. The first syllable of each group is accented lightly.
Maintain a soft and clear tone and open the jaw, lips and throat well for free tone. The speed should be fast enough to give an easy, bouncing rhythm.

Singing-speaking Transition Exercises

(1) Sing the following syllables, using two breaths for the series, or one if possible:
Mah maw mah / mah maw moh maw mah / mah maw moh moo moh maw mah / mah maw moh moo mee moo moh maw mah.

In the tonic sol-fa system, the tune is : do-re-do / do-re-mi-re-do / do-re-mi-fa-mi-re-do / do-re-mi-fa-so-fa-mi-re-do.

Repeat the series four times, moving the starting note up or down by one tone each time. Sing slowly with well-shaped mouth openings.

(2) Sing the series in exercise (a) to the following tune:

Do-mi-do / do-mi-so-mi-do / do-mi-so-do-so-mi-do / do-mi-so-do-mi-do-so-mi-do.

In the eight-tone octave, the intervals are the third, fifth and eighth tone of the octave and the third of the octave above.

(3) Repeat the series and tune in (b), substituting the 'No' sound for the syllables given. Then sing the first group, using 'No' sounds and immediately repeat it in speech in a rising and falling pitch pattern as close to the sung melody as possible. Alternate singing and speaking the combination, making the speech tone as musical as possible. Repeat this with the second and third groups.

(4) Repeat all the above groups, substituting for the given sounds any one-syllable word which includes a nasal consonant and a vowel or dipthong, such as "my" "now," "ding". etc. Sing and speak the combinations by turns with these words. When you feel

there is good resonance present, record and listen to both your singing and speaking tone.

Exercises for the Soft Palate

1. Raise and lower the soft palate repeatedly by saying the following combination of sounds:
   NG...Ah, NG...Ah, NG...Ah.
   Vary these sounds with the combinations:
   NG...Oh; Ng...aw; Ng. . .ow; Ng...ay, Ng...eye.
2. Open your mouth widely as you say words like:
   Man, sand, time, ham, town, now, Dan, sin, mine.
   Deliberately over-nazalize the vowel sounds by opening your mouth as little as possible. Alternate between the fuller sounds, when your mouth is open, and the sharp, nasal sounds when your lips are narrowed, to appreciate the difference in resonance.

APPENDIX K

RESONANCE EXERCISES USED BY ROBERT PARKS

The following exercises are used by Robert Parks for developing resonance. The exercises are given in the form of direct orders and are close to the words he uses.[1]

(1) Open your jaw and place your hand over your mouth. Hum easily, feeling the resonant vibrations in your mouth.

(2) Place your fingers on your nose and hum, feeling the strong vibrations of nasal resonance.

(3) Place your fingers on your chest, shoulders and back of your head and hum in different pitches. Feel the vibrations that are present in these areas as you alter the main areas of resonance.

(4) Kneel down on all fours and drop your head forward. Hum, feeling the strong nasal and head vibrations in this position. Keep humming and raise your head slowly until you are looking straight ahead. Open your mouth, forming the "Mah" sound, keeping the vibrations strongly "forward" in the face. Drop your head down again and raise it again, using different vowel sounds as you open your mouth each

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[1] The information in this appendix is derived from interviews with Robert Parks and from observation of his classes.

time. Rise slowly to your feet, humming all the time and allowing your head to remain bent until you are fully upright. Raise the head and open the mouth in a series of vowel sounds again, maintaining the same strong vibrations in the face "mask" which you experienced while you were kneeling.

(5) Place a cork between your teeth and stretch your mouth open widely while making a variety of vowel sounds. Feel the open, relaxed quality in you throat.

(6) Place your fingers on your larynx and swallow. Feel the upward and downward movement as this occurs. Make full vowel sounds, checking that there is minimal upward or downward movement of the larynx, which will constrict and distort the sound.

(7) Work in four-note combinations with the piano, singing the sounds "Hum-mum" to each note. Make the sounds brightly and energetically. Sing these syllables in progressively higher combinations of four notes without strain. Repeat, substituting the word "Hullo" for "hum-mum".

(8) Work in pairs, facing a fellow student at some distance. Matching your pitch to random notes on the piano, using the sound "Hum-mah" and "send" that sound to the student opposite you with an "intention" behind it.

(9) Lie on your back. Start humming. Bend your legs to the right as you roll your head to the left. Repeat this action continuously with head and legs moving in opposite directions.

(10) Lie on your stomach and hum. Bend your legs at the knees and move them from side to side, together. While you are doing this, raise your head and change the hum into a "Ah" sound. Replace your head on the floor and repeat.

(11) From a prone position, keep humming continuously and sit up. Open the sound into vowels such as "Ah" "Oh" and "Ee".

(12) Alternate between voiced "NG" sounds and vowel sounds, feeling the movement of the soft palate.

(13) With a fellow student, sing alternate lines of a speech to an improvised tune and speak the lines immediately afterwards, trying to retain the fullness of resonance on vowel and nasal sounds that you achieved while singing.

APPENDIX L

RESONANCE EXERCISES USED BY ROWENA BALOS

The following exercises are used by Miss Balos to develop vocal resonance. The exercises are given in the form of direct orders and are close to the words she uses.[1]

(1) Stand upright. Let your head drop back and start humming, feeling the strong vibrations in your throat and chest. Now move your head, so that you are looking directly forwards. Hum with your head in this position, feeling the strong vibrations of oral resonance in your mouth and on your teeth. Allow your head to fall fully forward, towards your chest and hum again in this position. Feel the vibrations strongly in the nose and cheeks. Move your head to and fro while humming, feeling the centres of resonance shifting according to your head position.

(2) Hum strongly, with the mental image of having a "hollow head" in which there is space for full vibrations.

(3) Move your soft palate by saying the combined sounds:

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[1] The information in this appendix is derived from interviews with Miss Balos and observation of her classes.

Ng-Ah, Ng-ee, Ng-Oh, Ng-OO, Ng-Eh.
With a mirror, watch your soft palate move down to open the nasal passage to resonate "Ng" and then move upward to close off the nasal passage for "Ah" and the other vowel sounds, which are resonated in the mouth. Do these combined sounds rapidly, to make the soft palate move flexibly.

(4) Exercise the tip of your tongue by making a rapid series of "L" sounds, followed by vowels, such as "La" "Lee" "Lo", etc. Move the back of your tongue by making a series of "Ga" and "Ka" sounds. Move the centre of the tongue by holding the Mid "E" sound. Check that the tongue does not rise too high to allow the passage of air over the top of it.

(5) Place your fingers on your larynx and move it to and fro loosely while you make open sounds such as "Ha," "Hi," and "He". If your tongue tends to pull backwards while you are making these sounds, hold the tip of your tongue with your fingers and repeat these sounds.

(6) Massage the joint of your jaw with your fingers. Move your jaw easily up and down.

(7) Open your jaw widely "as if you were screaming silently". Now open your mouth widely as if you were laughing silently.

(8) Clasp your hands together and shake them vigorously.

Allow your jaw to move up and down loosely with the momentum of this shaking.

(10) In a standing position, hang down from your waist and start humming. Raise your body slowly, feeling the strong vibrations in your face, and open your mouth on a variety of vowel sounds as you come upright.

(11) Using a piano, choose five-note combinations such as the sol-fa tonic "Do-re-mi-re-doh and hum the first two notes. On the last three notes, open your mouth to sing "Mah", "Me" or "Mo" sounds. Repeat these combinations in higher and lower pitches.

(12) Move your lips vigorously on the sounds "Bri", "Bray" and "Brai". Allow your lips to flutter loosely on the "B" sounds. Burr your lips together, like the sound of a motor-cycle.

APPENDIX M

RESONANCE EXERCISES USED BY KATHLEEN STAFFORD

The following exercises are used by Miss Kathleen Stafford to develop vocal resonance. The exercises are given in the form of direct orders and are close to the words she uses.[1]

(1) Make a prolonged "MMMMM" sound. Place your fingers on your throat, nose and lips while you are making this sound and feel the vibrations of resonance.

(2) Say the word "Dong" and feel the resonance move from the throat to the nasal passages, as the sound is completed.

(3) Massage the joint of your jaw and move your jaw easily up and down.

(4) Move your soft palate up and down by alternating the sounds "NG" and "Ah;" "MM" and "Ah" and "NN" and "Ah". Let the sound move smoothly from "NG" to "Ah" without a clicking sound in the glottis.

(5) Say the complete series of vowel and dipthong sounds, shaping your lips carefully for each different sound. Make sure that the tip of your tongue rests behind

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[1] The information in this appendix is derived from interviews with Miss Stafford and from observation of her classes.

your lower teeth throughout the formation of these sounds, so that the fullest amount of resonation in the mouth is possible.

(6) Say the sound "MMM", bringing the sound well forward into the face "mask". Do not compensate by moving your head and neck to initiate the sound, but use strong breath pressure to bring the sound forward.

(7) Make the "MMMM" sound with a feeling of "Joy" "Command" or "Despair" behind it. Do not allow the sound to droop away but sustain the mood vigorously from start to finish.

(8) Say the series of sounds; "Mang-meng-ming-mong-mung", or "Nang-neng-ning-nong-nung" using the vowel and nasal sounds fully and with vigour. Now do the series of sounds with a definite intention behind them, such as "I will not see you tomorrow", or "Will you please try to help me"?

(9) Imagine that you are trying to direct the "MMM" sound some distance in front of you, or to someone behind you. Use extra breath to bring the vibrations fully forward into the face.

(10) Read a piece of poetry, paying particular attention to fullness of resonance on vowel sounds and nasal consonants.

APPENDIX N

KLINGHARDT'S MARKINGS FOR INTONATION[1]

Herman Klinghardt (1847-1926) was a German linguistic scholar who devised a series of symbols to show the characteristic pitch intonations of French, English and German speech. Although his work on English intonation[2] has not been translated fully into English, an American speech teacher, Margaret McLean, obtained permission from Klinghardt to summarize his system for teaching purposes. She subsequently published extracts from his work in two of her own books.[3]

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[1] The information in this appendix was derived from interviews with Dr. Machlin and Robert Parks, and from the following books: Margaret Prendergast McLean, Good American Speech, 1st, rev. ed., (New York: E.P. Dutton and Company, Inc., 1952), and Edith Warman Skinner, Speak with Distinction, 5th ed., (New Brunswick, N.J.: Edith Warman Skinner, 1965).

[2] Hermann Klinghardt and G. Klemm, Ubungen im englischen Tonfall fur Lehrer und Studierende, (Cothen: Otto Schulze Verlag, 1920).

[3] Margaret Prendergast McLean, Good American Speech, 1st rev. ed., (New York: E.P. Dutton and Company, Inc., 1952), and Margaret Prendergast McLean, Oral Interpretation of Forms of Literature, (New York: E.P. Dutton and Company, Inc., 1942).

Klinghardt's symbols are as follows:

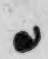
The "measuring line" which represents the average pitch of the speaker's voice.

● The heavy dot, representing a stressed syllable.

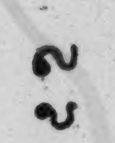
· The light dot, representing an unstressed syllable.

• The medium dot, representing a secondary stressed syllable.

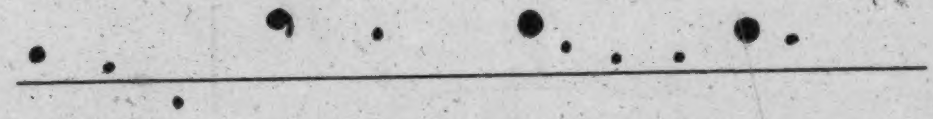
● The heavy dot also shows level intonation.


The upward "comma" shows rising intonation.

The downward "comma" shows falling intonation.


These extended symbols show circumflex intonations which both rise and fall on the same syllable.

The measuring line and dots are written above the sentence to be transcribed thus:



Are you quite sure you're coming to the party?

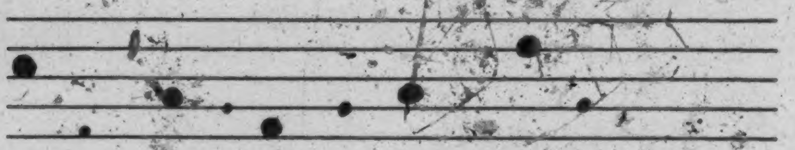
Robert Parks uses Klinghardt's symbols, as illustrated above, for pitch transcriptions.

Dr. Machlin varies slightly from Klinghardt's system. She uses music staff paper with five lines for transcription, instead of the single measuring line. Dots on the middle of the staff show the middle of the speaker's range.

Extremely high-pitched or low-pitched syllables are shown by dots placed on the lines or spaces above and below the middle line.

Dr. Machlin also omits the use of the medium dot (representing a secondary stressed syllable) and the symbols showing circumflex intonations.

A simple example of her transcript is:



Oh no, not again! I can't take it.

APPENDIX O

PITCH EXERCISES USED BY DR. MACHLIN

The following exercises are used by Dr. Machlin to extend pitch range. The exercises are given in the form of direct orders and are close to the words she uses.[1]

(1) Read aloud sample sentences which have been transcribed into "Dot-and-Tail" pitch intonations, either by yourself or someone else. Try to follow the rise and fall of words and syllables, as the dots dictate. Record your rendering and compare it with the transcription, to see how closely you have managed to achieve the variations in pitch.

(2) Transcribe speeches in "Dot-and-Tail" symbols from dramatic recordings, such as Edmond Rostand's "Cyrano de Bergerac", as spoken by Jose Ferrer (Capital W283). Try to reproduce the wide range of inflections yourself.

(3) Collect samples of strongly inflected sentences from conversations you overhear. Write them out in pitch transcription. Work with a partner, reading his transcriptions aloud and letting him read yours, so that you can check their accuracy.

(4) Sing through an octave on the piano, using the "Ah" sound to match each note. Substitute the words

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[1] The information in the appendix was derived from interviews with Dr. Machlin and observation of her classes, and from her book, "Speech for the Stage".

"One" to "Eight" for the "Ah" sound and repeat the exercise.

(5) Sing the word "One" at the same starting point on the piano as you used for Exercise 4. Start to sing the word "One" a second time, but change over to speech by sliding up in pitch from where you started and then cutting the sound off short. Continue the number sequence up the octave, singing the first number of each pair and sliding into speech with the second. The speaking of each number should begin exactly on the pitch at which it was sung. Each spoken word has a rising inflection, except "Eight", which has a falling inflection. Repeat this down the scale, using a falling inflection on spoken numbers, except "One", which is said at a level low pitch.

(6) Sing the following sequence of numbers rapidly up and down over the space of an octave. The rhythm is achieved by stressing the underlined numbers:

1,2,3,4,5,4,3,2,
1,2,3,4,5,4,3,2,
1,2,3,4,5,6,7,8,7,6,5,4,3,2,1.

Speak the same series, with the rising and falling pattern of the sung melody. Repeat, starting each repetition one note higher in pitch.

(7) Yawn deeply. Speak each of the syllables below on a long, continuous pitch slide, beginning at your lowest pitch and sliding steadily to your highest: "Mah", "Maw", "Moh", "Moo", "Mow", "My", "May", "Me". Reverse the process, sliding all the way down on each sound.

(8) Speak the following phrases, using pitch leaps, up or down. Use slides of your own inventions:

Down! Down! Down!
Well! Well! Well!
Oh, no!
Why not?
Who wants to know? I do! I must know!
It's impossible! Nothing's impossible!

(9) Work with another actor, one of you using the word "Yes" and the other using the word "No". Begin with low-pitched words and build gradually by "topping" each other until your highest pitch is reached.

(10) Read poems, such as John Donne's "Go and Catch a Falling Star" with constant pitch changes, to bring out the ironic humour. Make your own selections from dramatic material to experiment with pitch change. Keep your highest and lowest pitches for intense emotion only. Regard these readings as exercises for stretching your range rather than efforts at communication.

(11) Listen to high and low pitches used for characterization in recorded plays. In the records below, hear how different pitches are used effectively as aids to characterization. After listening to them, judge of their success and find other such examples in recorded plays.

Peggy Ashcroft as Beatrice in "Much Ado About Nothing" (London, 4362).

Hume Cronyn as Polonius in "Hamlet" (Columbia, DOL302).

Laurence Olivier as Othello in "Homage to Shakespeare" (Argo, NF4).

APPENDIX P

PITCH EXERCISES USED BY ROBERT PARKS

The following exercises are used by Robert Parks to extend pitch range. The exercises are given in the form of direct orders and are close to the words he uses.[1]

(1) Listen to other voices to identify the use of different pitch qualities, particularly unusual qualities which may be useful to you as an actor.

(2) Transcribe sentences into the symbols of the "Dot-and-Tail" pitch transcription system. Vary the intonations in each sentence and see how the meaning of the sentence alters accordingly.

(3) Work with a piano, matching your pitch to the musical notes over the space of about an octave. Use the sounds "Ha" "He" or "Hi" to match each note. Do this in both ascending and descending pitch. Try to speak these sounds in the same pitch as the musical note after singing it.

(4) Sing the sound "EE" twice on each note as you progress up the piano to an easy high point. Change the sound to "Ah" on each note as you descend down

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[1] The information in this appendix was derived from interviews with Robert Parks and from observation of his classes.

in pitch. Alternate this by singing "He" sounds as you ascend in pitch and "Ha" sounds as you descend in pitch.

(5) Sing the phrase "Hello, how are you?" on a variety of single notes, sustaining the same note throughout the whole sentence. Immediately speak the phrase, matching the sung pitch as exactly as possible. Repeat this exercise using a variety of sentences, or lines of poetry.

(6) Voice the "Wooo" sound, rising from your lowest pitch up to your highest pitch on a continuous swoop. Follow this with four "Woo" sounds in rising pitch on a single breath.

(7) Speak a line from a poem in falsetto tone, upper middle range, lower middle range and lowest range. Try to keep variety of intonation in the line, even in falsetto.

(8) Work in pairs, one student listening while the other student makes arbitrary sounds, such as wind noises, barks or clock sounds, in a variety of pitches. Be aware of how these sounds and unusual pitches affect you emotionally and kinesthetically. Improvise a short scene with words or lines to see how you could incorporate these sounds and pitches in a scene.

(9) "Opera" Exercise:

Work in pairs, with another student. Using an improvised tune, sing alternate lines of a learned Shakespearean speech to each other while you improvise a scene, such as laying a breakfast table or trying to board a bus. Use as wide a variety of pitches as possible. Repeat the scene, speaking the lines to each other. Try to retain a wide variety of pitch in the spoken lines, as you did in the sung lines.

APPENDIX Q

PITCH EXERCISES USED BY ROWENA BALOS

The following exercises are used by Miss Balos to extend pitch range. The exercises are given in the form of direct orders and are close to the words she uses.[1]

(1) Make sounds at different voice levels, using only silent breath to begin with, until you feel you will be able to create the sound without strain or tension.

(2) Listen to various notes in higher and lower pitches on the piano. Think what different mood changes these sounds convey to you. Low notes may suggest laziness or malevolence, for instance, while higher notes may suggest excitement, joy or fear. Try to match these sounds, conveying the emotional overtones they suggest to you.

(3) Think from your "centre" as you try to produce these higher and lower sounds. Make a sound as if you were trying to tickle someone with it. Now try to get someone out of the room with your sound.

(4) Sing the "Ha" sound in rising pitch over the space

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[1] The information in this appendix was derived from interviews with Miss Balos and from observation of her classes.

of five notes on the piano, using one "Ha" sound for each note. Sing back to the starting point again. Now join the sounds up on one single "Ha" sound, letting the wound float out effortlessly. Repeat this exercise without piano accompaniment.

(5) Work in five-note combinations on the piano in higher keys, using the "Hi" and "He" sounds, instead of "Ha". Take the combinations of notes more quickly and join the sounds together, as if they were a thought. Feel the lightness of the sounds. Smile while you are making them.

(6) Bend down from the waist while you are making "Hi" or "He" sounds in different pitches and shake your body loosely to ensure that you are not tensing to create these sounds.

(7) Voice the "EE" or "Ah" sound, starting at your lowest pitch, and make the sound rise in a continuous swoop up to the top of your tonal range and down again.

(8) Work in pairs, using the words "Will you?" and "No!" Let one student ask the question and the other reply, raising your pitch slightly on each question and answer until you have reached your highest pitch.

(9) Work in pairs, using the word "Hi!" Say the word in a wide variety of intensities and moods, with your partner giving appropriate replies in the same mood.

APPENDIX R

PITCH EXERCISES USED BY KATHLEEN STAFFORD

The following exercises are used by Miss Kathleen Stafford to extend pitch range. The exercises are given in the form of direct orders and are close to the words she uses.[1]

(1) Find the "middle" note in your voice by singing the "La" sound to descending notes on the piano, until you can go no lower without growling the tone. About 8 or 9 notes above this lowest note will be roughly the "centre" note in your speaking voice. Match your voice to the musical notes a little way above and below this centre note.

(2) Match your voice to random notes on the piano, within easy range of your "centre" note.

(3) Hum on an easy, middle-pitched note. Now make a short hum on a "friendly" note. See how the emotion governs the change in pitch. Now make the "MMM" sound with the following mental intentions behind them: "Anger" "Arrogance", "Recognition of someone you like", "Command", "Sadness" "Joy", "Fear". Hear

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[1] The information in this appendix was derived from interviews with Miss Stafford and from observation of her classes.